

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

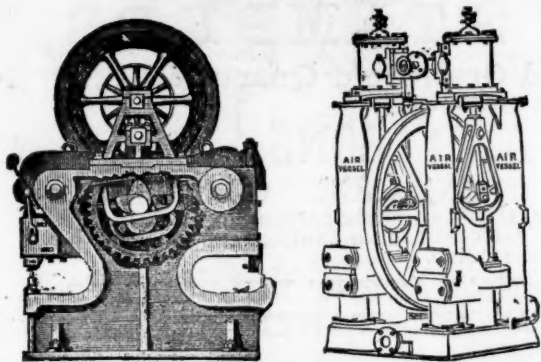
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No. 2263.—Vol. XLIX.

LONDON, SATURDAY, JANUARY 4, 1879.

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PARIS,
BRONZE MEDAL, 1867.



ORDER OF THE CROWN OF PRUSSIA.



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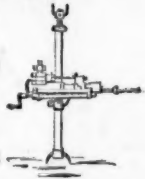
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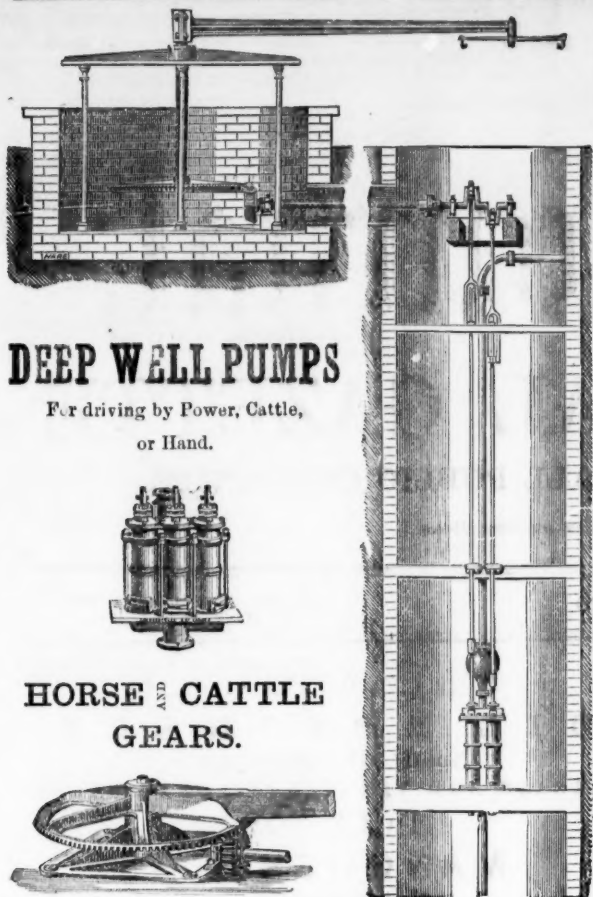
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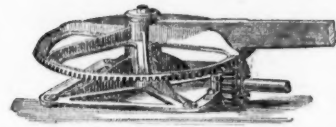
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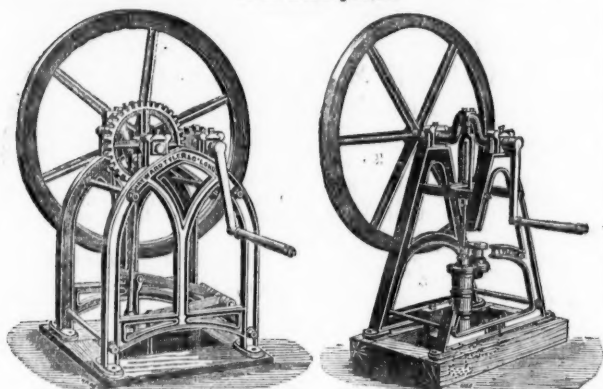
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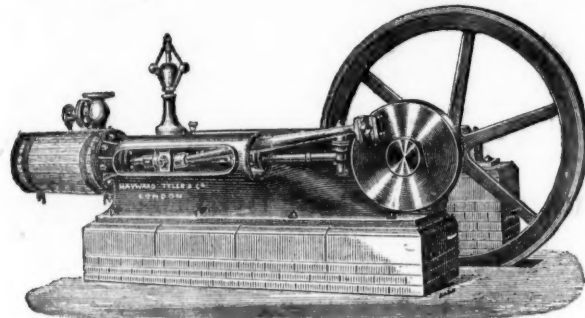
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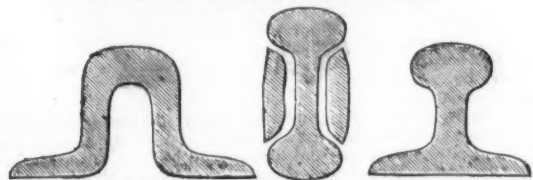
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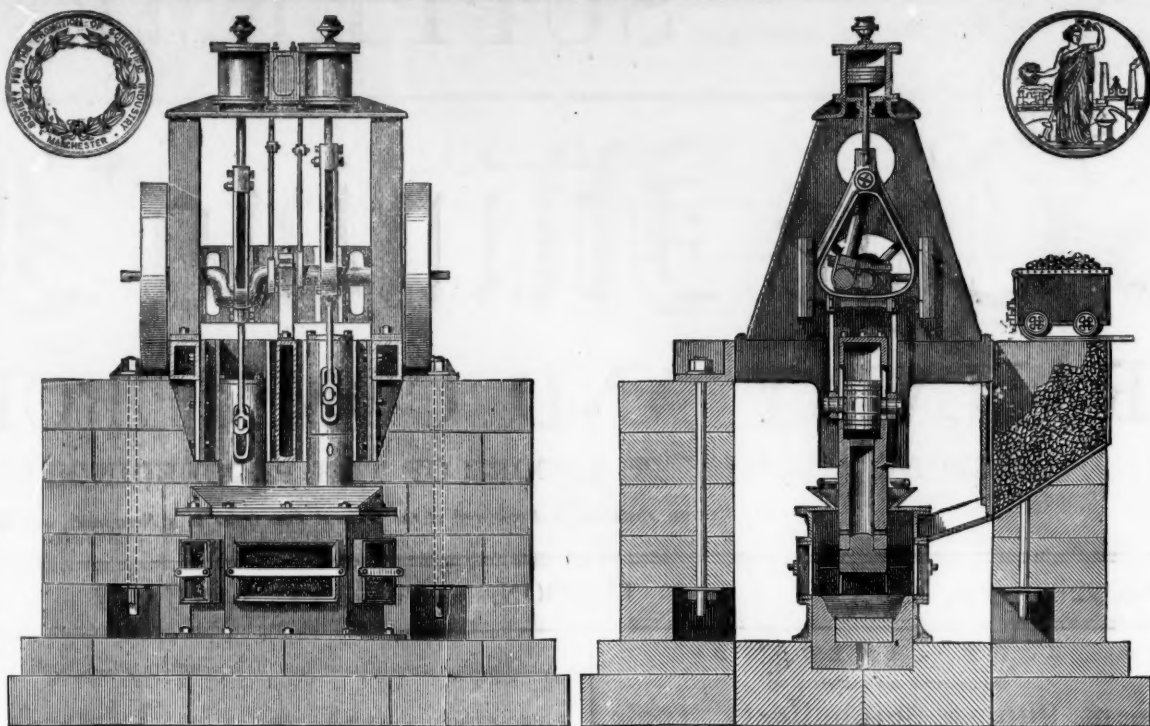
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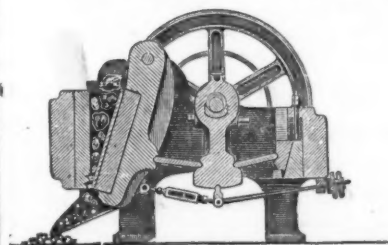
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Original Correspondence.

GAS COMPANY SHARES v. ELECTRIC LIGHT COMPANY SHARES.

SIR,—At the beginning of last year the electric light was not much known in England. Messrs. Siemens Brothers had introduced in not without success for lighthouses, and Messrs. Wilde and Co., in Manchester, had made dynamo-electric machines for electrotyping, without thinking to make use of them for lighting purposes. If they thought of it, perhaps also tried it, at least the public did not get to know of it. About six months ago Messrs. Chas. Ball and Co. began to introduce Gramme's dynamo-electric machines of continuous current, and I believe that it was Serrin's lamp which they recommended at that time. Everyone knows that they did not succeed to introduce either Gramme's or Serrin's lamp. Englishmen did not care to buy a machine which could give light to only one lamp, and which required besides a steam or gas engine of several horse-power; this also is the cause that Messrs. Siemens Brothers had more success in other countries with their dynamo-electric machine and lamp, which are very similar to Gramme's and Serrin's than in England. It was the opening of the Paris Exhibition and the show which was made there and in other parts of Paris with the various systems of dynamo-electric machines and lamps which gave the first impulse to the introduction of electric light in England, and as the Jablochkoff candle was at that period brought to greater perfection than others, and shown at various places in Paris with advantage, naturally it had, compared with others, a better chance to be well received in England.

We see them now on the Embankment, at the Victoria Viaduct, and at Billingsgate Market, and I am told that they are introduced in several ironworks at Middlesbrough. At present they are supplied by the Société Générale de l'Electricité, at Paris, as hitherto there is no company formed in London. This Paris company has been formed with a capital of 300,000*fr.* Will it pay? Does it pay now? Will it pay in future? In order to enable us to form an opinion about these questions we have to consider various circumstances. The Jablochkoff candle must be sold in very great quantities, and all over the world, to yield a profit large enough to pay only 5 per cent. on the capital—15,000*fr.*—and the working expenses of the company, and I think that this is a much larger amount of profit than can be made, if even the company makes 4*d.* out of each candle, and perhaps 5*d.* or more out of each lamp with shade. Then there is to consider that six months ago the Jablochkoff candle had no competition. Since then the Rapiett, Werdermann, and Wilde lamps, and perhaps others, have been brought out, which as competitors will take their place, and we do not know how many more, perhaps more perfect competitors will arise in the next six months. For instance, I find that, from Nov. 8 to Nov. 19, 17 patents for new inventions referring to electric light have been taken out, and every week brings new inventions. We have further to consider that the Jablochkoff light can only be used by a dynamo-electric machine of alternating currents, and of these only two are now in existence—one is Gramme's, and the other is Wilde's; and, as Messrs. Wilde and Co. have begun a Chancery suit against Gramme's machines, which suit is not decided yet, we believe we are right in saying that Gramme's machine is in Chancery, has therefore no legal right to be sold and used in this country, and, in fact, the Jablochkoff candle has no machine which could be regularly sold in this country without fear to be threatened with a lawsuit which, to say the least, cannot be pleasant. Not that I have much confidence in Messrs. Wilde's patent; but I believe I am right in saying that the very fact that the lawsuit is not yet decided is against the sale of the Jablochkoff candle. It is likely that the question referring to these patents will never be tried; but that does not give any guarantee against the annoyance of a Chancery suit to the purchasers of the Jablochkoff candle. The sword of Damocles, in the shape of a Chancery suit, would always be hanging over their heads. Later on I may have to say more on the question of the various patents taken out sooner or later for electric lights. At present, to conclude what I have to say about the Jablochkoff candle, I will draw the attention of your readers to the fact that hitherto it has only been introduced where the company contributes towards the costs in one shape or the other, and that the various reports which have been published do not leave any doubt but that the Jablochkoff light is a very expensive one.

According to the report of the Borough Engineer of Liverpool the cost of lighting the Avenue de l'Opéra, in Paris, with the Jablochkoff light is "six times that at which the same amount of illumination could be got from gas, and 21 times as much as the customary outlay on the ordinary lighting of a similar area." I am one of the few who have not had a chance to see the Jablochkoff light at the Avenue de l'Opéra, or anywhere else in Paris. The more eager I was to see it as soon as it was introduced in London, and my opinion about it—after having seen it repeatedly at the Embankment and the Holborn Viaduct—I find fully confirmed in a report of a contemporary (leader in the Daily News, Dec. 26), which certainly is not favourable to the Jablochkoff light. There it is said—"The general impression is one of disappointment. . . . The lamps are not as bright as they have been led to expect. . . . There is a good deal to be desired in the distribution of the light." &c. And in the same journal I read further—"The Municipal Council of Paris resolved in October last to discontinue the present arrangements, but the Société Générale d'Electricité undertook to supply the electric lamps till the middle of January at the same cost as gas, without reference to the superior illuminating power of electricity. The beautiful effect in the Avenue de l'Opéra is, therefore, obtained at the present moment for the price that would be paid for the ordinary lighting by gas-lamps. Whether this can be done by the company without serious loss may be open to question.

Adding to this the fact that the division of light in the Jablochkoff candle is far from being perfect, as the extinction of one light causes that of others, and, taking all what I have said in consideration, I certainly shall not feel induced by the Jablochkoff light to sell my gas company shares.

With the exception of the Jablochkoff candle and the Gramme machine, with alternating currents, there is neither an electro lamp nor a dynamo-electric machine which hitherto has been supplied for regular use, if even several new lamps have been brought out, and companies have been formed to supply them. Some of them have been shown to a few favoured individuals when they have been tried as an experiment, but none of them have yet been sold or been in use for some time; consequently, we are not yet in a position to form an opinion about them. Siemens' machine and lamp have been supplied to a photographic establishment in Regent-street, where it can be seen. It is said that the light makes the horses passing along the street shy, which certainly will prevent others to introduce it; also, as an engine of 5-horse power is required to drive the dynamo-electric machine, not many photographers will feel inclined to order. Siemens' machines and lamps have also been repeatedly tried in the open air, on cricket and football grounds, without much success, which unfavourable result may be attributed to the failings of the steam-engine, or, perhaps, also to bad management. The very same thing happened at the Society of Arts, on Dec. 4, when Mr. James N. Shoolbred read a paper "On the Practical Application of Electricity," &c. There was a Siemens' lamp suspended from the ceiling of the lecture-hall, which, according to the report in the paper, varied very much in intensity, and at times went so low that the gas had to be turned on, which inconstancy Dr. Siemens attributed to the insufficiency of engine-power. The very fact that such an eminent firm as Messrs. Siemens and Co. do not seem to be much inclined to improve their machines and lamps to make them applicable for general use must lead us to the conclusion that they with their great experience do not believe much in the future of the electric light. As far as the gas company shares are concerned this is certainly another reason that I shall not offer those which I have for sale.

Messrs. Wilde and Co. is another large firm for bringing out new electric machines, and they, if even they did not hitherto show sufficient courage to fight their patent rights, at least come forward

with their, we must suppose, improved or perfected dynamo-electric machines of alternating currents and new lamps. They put the sale of them in the hands of the Electric Lighting Company, and that is all we know about them. I did not hear of any trial that has taken place, or that they have been introduced anywhere. All that we know is that they are similar to Gramme's machine—the prices are very high. A machine for 12 lights costs 315*l.*, and 5 per cent. annual royalty, that for each light one horse power is required, and that the carbons are consumed at the rate of 9 in. per hour per light; consequently, a change of carbon every hour will be required. The price of the lamps or carbon-holders is from 10*l.* to 20*l.* These particulars of Messrs. Wilde's machine do not show any advantage over Gramme's machine with Jablochkoff's carbons—neither a progress in the introduction of electric light. The machines are similar to two Siemens' machines put together; therefore, the costs of production cannot be so great as to justify the high prices they are offered at.

The same company (Mr. Hollingshead) had first introduced the Lontin machine and lamp, which has been and is still lighting up the Gaiety Theatre, in the Strand. They were the very first shown in London, and created great excitement. They were praised in the newspapers as being the greatest perfection, showing the most favourable result in dividing the electric current, and in doing the greatest wonders of lighting, and requiring only very little mechanical power. But, alas! after a very little time it became known that at least eight horse power is required for their five lamps, that the Lontin machine is in fact only one composed of five single ones, and not at all constructed for a division of light—and the excitement abated, and the hopes disappeared. Since then persons who have seen Lontin's lamps at the St. Lazare Railway Station and others who went to the Lyons Railway Station, in order to see them there, and were told that they had been removed, came back from Paris naturally with a rather unfavourable opinion about Lontin's machine and lamps. And now it appears that even the company who introduced them at certainly a very great expense have given them up, and we may well say that Lontin's machine and lamps belong to the antiquated ones, and will disappear from the present platform of electric illumination.

Another eminent firm of manufacturers is Messrs. Ladd and Co. They have supplied small dynamo-electric machines; but, instead of improving them and bringing out new ones, they preferred to introduce the American machine and lamp of Wallace, of which we heard a good deal about two months ago, but not since. If we add that the reports about the trials which have taken place were not very favourable, and that we have not yet heard that one of these machines or lamps has been regularly in use for some time, or even did not hear that it has been anywhere introduced, we suppose we have said enough to show that the competition of this American invention does not need to frighten us.

Strange to say, there have been lately many more lamps invented and introduced—only as far as a trial goes—than machines. A short time ago we only heard of Siemens' and of Serrin's lamp, occasionally also of Jasper's, which is a Serrin's lamp improved by a Belgian maker. Now we have Chertemps, Suissé, Werdermann, Rapiett, Reynier, and I believe others; but regarding dynamo-electric machines we only hear of Siemens, and of these we do not hear much and of Gramme. Gramme's are, it appears, nearly the only ones to be sold and to be used even when new lamps are to be tried. As mentioned before they were introduced by Messrs. Charles Ball and Co.—at least they were advertised and offered for sale by them. It would be interesting to know how many of these machines they sold and to whom. We could then, perhaps, gain some experience about their working, whilst at present we are kept in the dark. Messrs. Ball and Co. sold their business (the agency for Gramme's machines) to the British Electric Light Company for 14,000*l.*, and henceforth the company will sell Gramme's machines—of course, till they are superseded by others which are better and cheaper. There is nothing particular to praise in Gramme's machines. If your readers wish to know more about them we must refer them to Mr. Fontaine's book, one-half of which is filled with descriptions of Gramme's machines; as, in fact, the whole book may be looked upon as a prospectus to push the sale of Gramme's machines. Still it is in many parts very instructive, particularly in the reports about machines and lamps brought out previously, but certainly not exhaustive. If you study the patents taken out the last quarter of a century, and it will take you several days, you will be astonished to find how one patent has been based upon the other, and how very few—I do not except either Gramme or Wilde—will stand, if it should come to that, a good fight in the Chancery Court. We only wonder that the dynamo-electric machines are not offered to the market by other makers at a lower price.

We will also mention the new machine of De Meritens, of which very little is yet known, and the old one of the Alliance Company, in Paris, which, as it appears, had its time, and is now superseded by others. This company has recently improved the machine, and taken out new patents; but we did not hear that it has been anywhere introduced. In France only the Gramme machine had success. The Alliance Company supplied a year ago several machines for Jablochkoff's candle, but not lately—perhaps a resurrection is still possible. We must leave it to our readers to judge if what we have said about the dynamo-electric machines will induce them to sell their gas company shares.

The electric lamps recently introduced are Rapiett's, Werdermann's, and Reynier's. Rapiett's lamp had that great advantage to have been taken up by the proprietors of the Times, and a powerful company has been formed to introduce it. But we do not know of any other place but the Times office where this lamp has been introduced, and have not heard any opinion about it but by those who are interested in its success; therefore, we have very little to say about it. We expect that this lamp has many advantages which others have not, otherwise Mr. Rapiett would not have received the large amount of 25,000*l.* cash, and 5000*l.* shares for his patent; but we do not know yet much of these advantages, therefore our confidence is, perhaps, not quite so great as that of the shareholders. It has been said that Mr. Rapiett has lately improved his lamp by adopting part of the construction of the Werdermann lamp. We also do not know very much about its power of division of light, the dynamo-electric machine required for it, &c.; therefore, our opinion about the value of shares of gas companies has certainly not been altered by the Rapiett lamp.

Reynier's lamp has been first mentioned in your Journal, I believe, four or five weeks ago. It has been announced and praised as one of the best out; but hitherto we did not hear anything about it, and we do not believe in statements if we do not have an opportunity to test them—besides, the report about that lamp by Fontaine which you published is certainly not favourable to it. It is said in this report that with five lamps on the circuit the galvanometer indication was 20, intensity of light 10 burners; and with 10 lamps on circuit the galvanometer indication was 15, intensity of light five burners. All the 10 lamps together gave, therefore, 50 burners total luminosity. That shows how much light is lost by the division; in fact, Mr. Fontaine could not well give a more damaging opinion about the value of the lamp as he has done in this instance.

Werdermann's lamp, like Reynier's, is of the incandescent system. It has been said that there is a similarity between them, which may even be looked upon as an infringement of patent; but that is not the case. They are both based on King's patent, and quite different one from the other. We have not seen Werdermann's lamp, neither have we seen Reynier's; we can, therefore, only judge from the description given of them, and the reports about the experiments with them; and, to judge from these reports individually, we are in favour of Werdermann's lamp. We hear that shortly they will be used to light the place before the Mansion House. This very likely will give us an opportunity to form an opinion about them. Favourable as it is now we, nevertheless, do not believe their use will extend so much as to cause the discontinuance of gas.

We have still to mention the Sun Lighting Company, with Mr. Harrison's patents, of which nothing is yet known; also Mr. Eddison's patents, of which so very much is talked, and so very much expected; and there are still a great number of embryo inventions and patents. Yet we do not think that we have any reason to alter our opinion—that the electric light will be very useful for certain

purposes, chiefly where costs are of less consideration; but it will never come in general use as the gas light is now, and, therefore, once more I shall keep my gas company shares.

CHARLES STEENE, C.E.

GOLD IN INDIA.

SIR,—Will you allow me to call attention to a circumstance which seems to make it probable that somewhere in the South of India there are gold fields far richer than those recently discovered? The learned Dr. Burnell, in his "Note on the Great Temple of Shiva at Tanjore," tells us that "in the eleventh century A.D. nearly all the great temples to Shiva in Southern India were built, and in the twelfth and thirteenth centuries the great temples to Vishnu were erected;" and it has always been a puzzle whence the great wealth came which enabled the Rajahs of Southern India to construct such enormous works, which, collectively must have cost millions. The marvel is increased by the fact that, so far from these Indian princes having been impoverished by this expenditure, they were still possessed of vast treasures, which fell into the hands of the Moslems in the fourteenth century, and were carried away to Delhi. But the famous inscription on the Tanjore Temple, the deciphering of which (an astonishing feat) has been effected by the same authority, sheds some light on the matter. Dr. Burnell writes:—

"The full importance in Indian history of Virā Cola's reign is only to be gathered from this inscription; but it contains other information also of great value. It proves, e.g., that in the eleventh century gold was the most common precious metal in India, and stupendous quantities of it are mentioned here. Silver, on the other hand, is little mentioned, and it thus appears that the present state of things, which is exactly the reverse, was only brought about by the Portuguese in the 16th century."

I submit that the great abundance of gold spoken of in the inscription can have arisen only from mines, and that in the terrible convulsions caused by the irruption of Moslem invaders from the north and Europeans from the west the position of these gold fields was lost sight of, but is, perhaps, even now on the eve of being rediscovered. At all events, it seems to me that there is sufficient encouragement for prosecuting the search for gold in the South of India with renewed ardour, and that it is very desirable the translation of the Tanjore inscription should be made accessible to the public.

EDWARD B. EASTWICK.

Hogarth-road, Cromwell-road, Dec. 31.

GOLD MINING IN CALIFORNIA.

SIR,—Gold mining in California has been neglected since the discovery of the Comstock Lode, but owing to the dishonesty in the management of the leading Nevada mines the confidence of the public has been shaken, and capital is returning to California for investment. Even if the cost of developing veins over 2000 feet below the surface were not taken into consideration, how can small investors be expected to have still confidence in those mines which were once bonanzas, since it is an open secret that its directors and managers are making contracts with each other for milling the ore, and are buying supplies at prices to suit themselves. The ore has for some time been too poor to leave a profit to shareholders; it has only paid a profit to the mill companies—i.e., the managers, and the only interest which small stockholders are expected to have is to pay assessments. Statistics which I have carefully collected establish the fact that since the bonanza mines have ceased to pay dividends some 120 California mines have been reopened, to say nothing of the numerous new discoveries. The mineral resources of California are not only inexhaustible, but are scarcely developed, and by the aid of improved processes and machinery, and a better knowledge of industry, new and encouraging developments are made that give promise of restoring the great mining interest of California to its former importance. In illustration of the above, I shall from time to time point out some instances which will serve to show that mines which in former times could not be worked to advantage without proper machinery have now proved to be the richest.

Having recently returned from a tour of inspection, the following on the operations in Tuolumne County, one of the oldest and formerly one of the most prosperous mining counties of California, will be interesting to many readers of the *Mining Journal*, as English capital has of late been largely invested in this district:—

SOULSBY MINE.—For more than 20 years the Soulsby Mine has attracted the attention of all visitors to this section of the county, not on account of its works or richness of ore, but on account of its uniform production of paying ore. In one year (1859) the Soulsby Mine yielded over \$100,000. This mine has been paying dividends for many years, and if the proceeds from it some time ago were less than what they always have been, I am satisfied that it was due to the former management. Having visited the mine often in the capacity of an expert, it appeared to me unexplainable that the expenses for working the mine could ever be higher than its production. Its former owner, the late Donald Davidson, had sold the mine to an English company, and Messrs. Cross and Co., of San Francisco, were entrusted with the management, and Mr. R. Jones with the superintendence. The mine, however, did not improve, and the company concluded to go into liquidation. The secretary was dispatched to wind-up its affairs, but upon personal inspection and the advice of practical mining men, he changed his mind. The mine is again in first-rate condition, and the profits during the last two years have exceeded \$100,000.

The CONFIDENCE MINE has also been worked many years ago, and produced several millions of gold, but owing to bad management the mine has been laying idle for some time, until its original owner, Mr. B. Holladay, opened it again; it has now immense works, and is working with 30 stamps.

QUARTZ MOUNTAIN MINE.—There are a number of mines on Quartz Mountain which have been developed to the extent of 300 to 400 feet. The old Heslep Mine has again been reopened under the above name by San Francisco and London capitalists. Their enterprise has been well rewarded, and the superintendent, Capt. Barry, informed me that a 20-ft. vein had been struck at a depth of 300 feet. The owners are making active preparations for the erection of another 20-stamp mill and other additional works.

The HARRIS MINE is another one which was formerly abandoned. It has again been reopened, and its present owner has put up a new 10-stamp mill and other works from the proceeds of the ore, which he crushed by hand in a motor.

The former importance of Tuolumne county seems to be revived by the rich developments which have been made of late in the

MONTICRISTO GOLD MINE, which bids fair to become one of the richest gold mines of California. It was located some ten years ago as a quartz mine, and has been prospected in many places along the vein wherever the outcroppings appeared on the surface. A great many holes were sunk, but they were not over 4 ft. deep. The quartz taken out did not satisfy the former owners, and the mine has not been worked until about three years ago, when a shaft was sunk to the depth of 30 ft., and the vein followed by a drift of about 40 ft. At the end of the workings a large body of gold-bearing sulphurets was found, which rather disappointed the former owners, as they were hunting for free gold. The ore at that depth did not carry free gold enough to satisfy their expectations, and work was suspended until the mine was sold some time ago to San Francisco capitalists. The Monticristo Gold Mine is located about seven miles from the town of Sonora, and only a short distance from Summerville. A good wagon road is leading direct to the mine. The location is 1500 ft. in length and 600 ft. wide, and the croppings are traceable the whole length. A new shaft has lately been sunk, which at a depth of 35 ft. exposed a vein of 18 to 24 in. in thickness; the vein is composed of auriferous quartz, and its course is almost perpendicular. The quartz on the surface contains oxide of iron and considerable free gold, but as we descend on the vein the ore gets more and more intermixed with iron pyrites, containing from 20 to 60 per cent. of sulphurets; a sample of it, which is about 24 in. long and 15 in. wide, will be presented to the Academy of Sciences as the largest piece of sulphurets ever found in California. Assays made by several prominent assayers show the sulphurets to contain from \$400 to \$800 per ton. The assays of the ore yielded from \$190 to \$210 per ton in gold. A few tons of the ore was shipped to

San Francisco some days ago for a practical test, which gave by actual working the results already stated.

Some of our prominent citizens have formed a company to work the Monte Cristo Gold Mine on a large scale, among which are—Hon. A. J. Bryant, Mayor of San Francisco; Wm. Humphreys, Wm. Concoran, D. A. MacDonald, Thomas Prendergast, and some English capitalists, whose names will be taken as sufficient guarantee that the management of the mine will be conducted on strictly economical principles.

There are several other mines to be mentioned in Tuolumne county which have shown a marked improvement of late, such as the Golden Gate, Mount Jefferson, Nonpareil, Riverside, Big Basin, Hunter, Patterson and Water's Mine, of which I shall give a more detailed account on my next visit. Most of these mines are not incorporated, but are worked by private capital. For the last mentioned mine the erection of a 40-stamp mill and chlorination works is contemplated.

J. MOSHEIMER,
Civil and Mining Engineer, Practical Chemist and Metallurgist.
San Francisco, California, Dec. 13.

MINING IN CANADA—SILVER ISLET.

SIR.—In my last I gave you a description of Silver Islet, taken from the valuable pamphlet of Mr. McKellar. Now, from 1873 to 1878 it is my duty to trace the history of this remarkable deposit of silver. The Silver Islet Company was originally started with a capital of \$6,000,000, but after awhile they discovered that it was too large a capital, and reduced it to \$1,000,000, and consolidated it, and called it the Silver Islet Consolidated Company. The chief stock in 1873 was held, so far as can be ascertained, by Alexander Sibby, Capt. Frue, Hon. Ed. Learned, and Mr. Marwin, and in 1873, at the time of the crisis, there was a large sum of money in hand to the credit of the company in New York. The panic came, and those of the stockholders who were in New York passed a resolution that the money should be divided, and a dividend was made. But this was entirely against the policy of Capt. Frue, who was at Lake Superior, attending to the working of the mine. His policy was to expend that money in the further development of the mine.

Then arose, also, another question. There was a great deal of silver in the ore at the mouth of the shaft and surrounding the shaft, "the cap of the mine," which had been preserved intact, partly for the purposes of keeping the waters of the Lake within bounds, but chiefly as a security, inasmuch as they could always get money on the ore in case at any time they wanted any to work the mine. Now, a portion of the shareholders wanted this ore used and turned into money and divided, and an artificial cap of brickwork put on the mine, but Capt. Frue and his party objected. Finally, matters became more complicated, and then Capt. Frue and Mr. Sibby sold out to the other party. Then the mine passed into the control of the Hon. Ed. Learned and those he represented. Work was resumed, and they have got down now to the sixth level, about 60 fms. The shaft is still going down, but the ore now taken out is taken chiefly from the sixth level. It is exceedingly rich, and the frosted work of native silver is most beautiful. Specimens of it would gladden the heart of any gatherer of specimens. This year they had a debt of \$400,000 in debentures outstanding, yet in less than three months they have taken out \$500,000 clear of all expense, and thus have enough to pay off their debenture debt, leaving \$100,000 to their credit. There are about 150 men permanently employed, and the mine holds as rich as ever.

But in addition to this mine on the Islet proper, on the property belonging to the company two other mines bearing good indications have been discovered. One is on the mainland, about 2 miles north of Silver Islet, the other is on an island called Squamash, to the south-west of Silver Islet. These veins of silver are identical in appearance and quality to that of Silver Islet, and are in all probability on the same lead. They are exceedingly rich, but of course only rich in indications on the surface. Miners who have any knowledge of the treasures hid in the earth do not expect to obtain a good paying lode of silver on the surface; they must have pluck and capital to make Nature give up her gold and silver. That is the chief reason why mining has not paid in Canada, as carried on by Canadians. They expected to scratch the earth like a hen and get large quantities of silver and gold from the process. They did scratch the earth, but they didn't get the gold and silver, so they said, "There's no use in mining." Then they sold out to the Americans. The Americans did not scratch the earth, but they went to work like men that had an undertaking to perform, and they got large quantities of gold and silver. Such is the history of Silver Islet. Sold by the Montreal company to the Americans because "it would not pay"—worked by the Americans and producing immense sums. It is said that some tons of ore that have been taken from the sixth level will average 90 per cent. silver!

Such has been the case all over Ontario. Our mining has been like the boy who planted a bean, and about ten minutes afterwards went and dug it up to see why it did not grow. Look at Madoc, look at Marmora, look at the innumerable holes that have been sunk on the north shore of Lake Superior. There is no mine, properly so called, that has been worked on true mining principles in the whole of Ontario, except the Frontenac Lead Mine, worked by Englishmen; and the Silver Islet Consolidated, worked by Americans. It certainly does not speak highly for the capacity Canadians possess in the way of mining. Yet it is not so much the fault of Canadians as the fault of the capitalists and the want of elasticity in our mining laws in Ontario. Canadians do well in other countries in mining—in Australia and California. One of the richest men in Virginia City, Nevada, is John S. Rae, a Canadian. But there is a good time coming, when the government of Ontario will be changed and men of capacity and knowledge and energy take their place.

Hoping that my readers may have derived some pleasure from the perusal of these letters, I wish them one and all—A merry Christmas and a happy new year.

Bourneville.
Toronto, Dec. 17.

MINING PROSPECTS ON THE PACIFIC COAST.

SIR.—The most important event during the past month in mining matters was the sudden rise in the value of Sierra Nevada stock, and its equally sudden fall. The announcement that a bonanza had been discovered in this mine caused a rapid rise in the value of the stock, which did not abate until it sold as high as \$298 per share. To-day it is quoted at somewhere about \$46, and the distress and misery that followed the sudden fall of the stock have been unequalled since the disastrous failure of the Bank of California some years since. To people constituted as Californians naturally are all warnings proved unavailing, and though a panic was predicted early in the day the inflation went on until the discovery was made that no bonanza existed. On the 2000 ft. level a vein of ore-bearing quartz was revealed, and a winze was sunk on the east wall of the vein to the 2200 ft. level. On the 2100 ft. level the ore body was penetrated about 15 ft., giving assays ranging from \$68 to \$1150, but much mixed with porphyry. In the winze, at the depth of 2200 ft., a station was established, and cross-cutting commenced. It was then found that the ore body was by no means so rich or extensive as had been predicted. This failure to sustain the anticipations of the shareholders and also the fear that the mine would prove an entire failure itself contributed chiefly to the sudden depression of the stock. In addition to this an apprehension was entertained that the dispute with the Union Consolidated Mine would involve a conflict with the Bank of Nevada people—the wealthiest on this Coast. The latter undoubtedly took every advantage they could of the terrible crash that ensued, but it would, perhaps, be unfair to ascribe the entire calamity to them, as has been done pretty generally. The rest of the Comstock shares of course went down sympathetically, and added to the panic. Subsequently a compromise was entered into between the managers of the Sierra Nevada and Union Mines, which is supposed to be satisfactory to both parties. The Union Consolidated cedes to Sierra Nevada the north 250 ft. of the disputed ground covered by its patent; Sierra Nevada gives a quit-claim deed to the Union for the south 48 ft. of the disputed ground, and makes over the 35 ft. claim in Union Consolidated which had been purchased, but which still remained unlocated. This arrangement effectually disposes of the boundaries

of the two mines. The Sierra Nevada Mine is now not only free from litigation with a powerful neighbour, but has obtained the right to use the North Consolidated Virginia shaft, which will save it an enormous sum in the way of working expenses.

I have thought it desirable to give these particulars in full, as I am aware that there are many people both in England and in Canada who are, or have been, interested in the Sierra Nevada Mine. I may add, that great as the disaster has been it does not by any means disprove the assertion that the mine is a good one. The winze has developed an ore body some 200 ft. in depth, but sufficient explorations up to this date have not been made to determine the value of the discovery. Mining at this depth is very slow, the heat in the lower levels of the mine being 145° Fahr., consequently the work is extremely tedious. In the early part of last month a large number of miners were discharged from the Consolidated Virginia and California Mines, and this action immediately tended to depress the stock of those mines to \$9½ and \$9¾, at which prices it was largely bought in as soon as offered. The withdrawal of the miners from the lower levels of the Consolidated Virginia, and the probable failure of that mine to resume dividends for some time to come, may be traced to speculative purposes by the owners of those mines, and also with the view of making a better price for their silver. While the mines on the Comstock lode are giving such unsatisfactory results, it is pleasant to be able to turn to other parts of the Pacific Coast where mining industries are being developed with every promise of success. In Utah, the few mines comparatively speaking that have been thoroughly developed are attracting general attention. With a very moderate amount of outlay the mines of Utah produced last year \$7,405,000. Among these mines may be mentioned the Ontario, which from Jan. 26, 1877, to August, 1878, gave to the owners a gross yield of \$2,820,785. In many of these mines the veins are true fissure veins, with regular and well-pronounced walls indicative of permanency. The Crimson Mammoth Mine, in the Tintic district (which lies in about the centre of the great mineral belt, which passes in a northerly course through Utah), produced \$270,000, which was taken out of the mine in three days' time. Altogether the complexion of the Utah mines is of a most promising character, and Eastern capital is being directed to their further development, as well as to the mines of Arizona, which, now that the Southern Pacific Railroad is rapidly penetrating that Territory, are assuming an important place in the mineral interests of this Coast. The Silver King is to be opened on the Comstock principle of deep shafts and underground workings. At present the deepest workings in this mine are less than 300 ft. from the surface, where now the incline ends, but the intention is to start a shaft at the base of the hill, and at 1000 ft. to drift for the magnificent ledge which makes down from the foot of the hill.

In a future letter I shall be able to speak more particularly of Arizona and its mines.

While other leading industries of the United States have been losing not only profits but principal in the crush of values to a gold basis, the mining industry, which has always been maintained on a gold basis, has increased both principal and profit, and according to the New York Mining Stock Circular finds itself better established than ever. The same authority states that the mines doing business in San Francisco, including one in New York, paid as much in dividends as all the railroads doing business in New York, although the investment represented by the mines was not a tithe of that represented by the railroads. The average total assessments levied on mines owned in San Francisco for the past five years amounted to \$9,706,800. The average annual production of these mines was about \$75,000,000. Hence parties in the Eastern States are now looking to this Coast for more profitable investments for their money, and we are feeling the effect in increased support to the mining industry of the State. The Boston Post of a recent date, speaking of the Comstock Mines, says:—"It is said that for the last year and a half one firm has sent over \$10,000 a day from Boston to San Francisco for investment in this class of stocks, and from all sources Boston has not invested less than \$25,000 a day for the past three months." I have not touched on the extraordinary developments in the Bodie Mine, nor on the well-authenticated reports of very rich developments in the South Bodie district. These and other relevant subjects I must leave to the consideration of a future letter.

San Francisco, Dec. 6.

E. J. J.

LONDON COAL SUPPLY.

SIR.—My letter in the Journal of Nov. 21 showed that, without any outlay on the part of the inland coalowners, their aggregate output can be delivered from the pit's mouth into the consumers' premises in the Metropolis, steamers bunkers, ships' holds for export, and to the chief centres of consumption in Kent, Essex, Suffolk, and Norfolk at an average saving of 3s. 6d. per ton on rail transit, and attendant expenses, by adopting the sea route, not swerved from by the Durham and Northumberland coalowners, via the Tyne, Wear, and Hartlepool, which course alone, with the transport per screw collier, enabled them to retain a footing in the London coal supply, as shown in the sequel, but which, like unto a quicksand, must disappear before a saving, by proposed system, of 5s. a ton on freight and attendant expenses from coal port in each instance to consumers, premises. These are by no means hypothetical or problematical results, but based upon practical incontrovertible data. A still stronger case presents itself; the steamboat owners are prepared to undertake the sale of the coal direct to consumers upon a del credere, or guarantee commission, resulting in a profit to the coalowners of 50 to 100 per cent. on the price at the pit's mouth, based upon the difference between same and the current selling rates advertised in the daily newspapers. Precited outcome is arrived at after payment of insurance, repairs, redemption (or depreciation), port charges, fuel and engine stores, wages, management, annual dividend of 20 per cent., City dues, lighterage, sacks, filling, loading and stowing, discharging same, and loading vans, cartage, rail toll, and shipping expenses at coal ports, wharfage, with an exuberant amount to meet contingencies, ample time being allowed for periodical overhaul and repairs, return cargo, and conveyance of agricultural produce at infinitely lower through rates than by rail alone; not entering into the calculation, the entirety of the working expenses for both trips being debited to the coal traffic. A paper read by the Member for North Durham, on Iron Ship Building, at the British Association Newcastle meeting of 1863, corroborates my aforesaid statement thus:—

About the year 1850 the carriage of coal by railway began seriously to affect the sale of North Country coal in the London market. It became essential to devise some means of cheap conveyance, to effect which the screw collier John Bowes, carrying 850 tons of coal, was built. To the success of this experiment is to be attributed the fact that we continue to supply so largely the London market, the introduction of the screw collier having revolutionised the coal-carrying trade.

The vast benefit that has accrued to the Durham and Northumberland coalowners by screw collier transport, so undisputedly admitted by one of the leading Durham and Northumberland coalowners, is a direct attack upon the good faith of this inland coalowners in their dealings with the miners. What stronger case can the miners submit to public opinion than that their employers are paying for railway transport and attendant expenses between 4s. and 5s. a ton more than it costs them sea-borne from pit mouth to consumers' premises in each case; further, that their sea-borne cost is 5s. a ton under Tyne sea transit, with attendant expenses, from coal pit in each case to consumers' premises; and by the steamboat company selling direct to consumers at a profit of 50 to 100 per cent. on their price at pit's mouth put into wagons? I am in a position, when the proper time arrives, to show the connection between leading coalowners and the Great Eastern and Great Northern Railways as to the impossibility of rail transit competing with sea transit, admitted by them in the plainest terms, and otherwise patent even to the uninitiated. My letters in the *Mining Journal* upon these two railways are before the public. The Manchester, Sheffield, and Lincolnshire Railway Company have access to Keadby, Grimsby, and Lincoln direct from the pits, and the Midland equally so to Lincoln, whence water communication by the Witham to alongside the seagoing steamer in Boston Deep. The Great Northern Railway Company Witham Navigation dues will be regulated by the Railway Commissioners, as shown in my letter in the *Mining Journal* of Nov. 2 last, wherein reference is made to their judgment

of March 8, 1877. The 16th paragraph of their annual report of Nov. 10, 1877, states:—"The railway companies have had recourse to various means to interfere with the independence of canals, and to obtain a control over them," but (paragraph 17) "we have power by statute to deal with the tolls as we may think fit." At this season, with the "Pax hominibus bonæ voluntatis" resounding in our ears, I shall not do violence to my feelings by enlarging upon my correspondence in the *Mining Journal* of Oct. 19 and 26, Nov. 2, 9, 16, 23, 30, and Dec. 7 and 14. My proposal synchronises with the special characteristics of the epoch, so practical and utilitarian in their tendency, and is in perfect accordance with the highest railway authorities, the Chairman of the London and North Western Railway Company, the general managers of the Midland, Great Northern, and Great Eastern admitting in the most unequivocal and distinct language the impossibility of rail transport competing with sea transport of coal. The North-Eastern Railway Company, in lieu of attempting to convey Durham and Northumberland coal over their system to their junction with the Great Northern, at an infinitely higher aggregate ton mileage rate than to the seaboard, have practically and for a long series of years solved the problem that an incomparably larger tonnage conveyed a shorter distance for shipment has given them year by year a much larger unassailable revenue, on which account they have encouraged by every means in their power the sea-borne coal traffic by gigantic outlay of capital in the construction and purchase and taking shares in the Tyne Dock at South Shields, North and South Docks at Sunderland, and Docks at Hartlepool and West Hartlepool, with accessory rail and drop communication, the extent of their sidings approaching 1000 miles.

All that is required of the coalowners is an undertaking on their part to ship their combined output at any one of the precited ports, as mutually agreed upon, which is the only means of restoring peace and prosperity to this large inland coal district. The coalowners have pursued a suicidal policy in sending their output by rail to London, which is the chief cause of the existing distress. However large their direct interests may be, their thousands of dependents—the miners—look up to their employers as faithful stewards of the trust confided to them by our common, omnipotent, and omniscient Father.

If it be true that their coal can be delivered in the Metropolis several shillings a ton under what they are mulcted by rail and under Tyne transit, and notwithstanding that the coalowners continue to send by rail, and reduce the miners' wages, I am at a loss to perceive the distinction between such action and that of withholding the labourers' wages, which crieth to heaven for vengeance. I withhold, for to-day, laying bare the insidious influences at work, the perpetrators of which will meet with well-merited retribution. "Habet Deus suas horas et moras." Without indulging in joyous peans for the moment, the miners can rest assured of the impending perfect discomfiture of the leaders who have foolishly arrayed themselves against public opinion and justice. There is not the least difficulty in coming to an equitable adjustment with a committee of coalowners neither directly nor indirectly connected with railways whose coal traffic to the Metropolis is doomed to be displaced by the incomparably cheaper sea transit, so proved by their own unimpeachable evidence.

WILLIAM JOSEPH THOMPSON.

6, Fitzwilliam-road, Clapham, Dec. 30.

THE METAL MARKET.

SIR.—The letter of your correspondent "Observer" has caused surprise to outsiders who were unaware of the *modus operandi* of the metal market. That quotations should be made and circulated by those who have no interest in production or consumption is an anomaly beyond conception. With the quotations of lead and spelter we have long been familiar, their falls and fluctuations being beyond understanding. Truly this is a dark mark-t. We have heard of Czars and despots, and of mob law, but never did we hear of a coterie of brokers dictating to producers and consumers the prices at which they shall buy and sell.

Allow an outsider to suggest to the smelters and their agents abstention from such an arena, assemble in an open exchange where respectable merchants congregate—the Royal Exchange. Let merchants nominate one member of unquestionable integrity to represent each metal; let them jointly fill up their list as business done justifies, forwarding such to the representative agents of the Press for publication. Public confidence would soon show its appreciation, and the self-constituted Moloch find his level.

Swansea, Jan. 1.

LEAD.

ELEPHANT ORE STAMPS.

SIR.—These machines are now adopted in America and Australia, and are made in two sizes—the larger one weighing about 7 tons and the smaller one about 4 tons. The following particulars have been received from America of their performances in both wet and dry stamping, with samples of stamped stuff and the screens through which the respective samples were stamped:—

Sample 1.—Copper ore, 30 tons in 24 hours, in water...Screens 4
2.—Gold quartz, 27 " 24 " " " 4
3.—" 15 " 24 " " " dry " 30
4.—" 10 " 24 " " " " 60
5.—" 15 " 24 " " " " 40

This sample (No. 5) was stamped by the small sized Elephant stamps in California.

NOTE.—No. 4, 16 perforations per inch; No. 30, 900; No. 40, 1600; No. 60, 3600 perforations per inch.
Dec. 2.

HAND-POWER ROCK-DRILL.

SIR.—As you kindly inserted in your valuable Journal a letter of mine a few months back about Messrs. Jordan and Co.'s hand-power rock-drill, I venture to write again on the subject, hoping that as sufficient time has elapsed for further trials of what promised to be such a valuable adjunct to mining work, those who have experience of the machine will give to the world such information as to its capacity as they may be possessed of. I would ask—1. Have any of the machines been used on underground work in this country?—2. With what results? I trust some of your readers may be able to give this much desired information.

A MINER.

ROCK-DRILL MACHINERY.

SIR.—With your kind permission I will offer a few remarks upon what appears to my mind a very indiscreet act on the part of one inventor towards another; and in this case I allude to the recent letters in your valuable Journal commenting upon the validity of the Eclipse Rock Drill, and, being possessed of an engineering turn of mind, I have recently obtained the Blue-book of the Eclipse, and also those of Mr. Edwards of 1874 and 1875, and have closely perused them. There is a very slight similarity of language in the specifications; but most certainly not in the drawings, for they are as unlike as they possibly can be, and how Mr. Edwards, as a patent agent, can ask your readers to believe that he has in any way made out his case I cannot understand. One thing is most clear to me, and I should think any impartial reader of the Journal, that Mr. Edwards has placed himself in a most invidious position. To my mind it would have redounded much more to the honour of Mr. Edwards if he had compared the inventions of the Eclipse Drill at first, instead of taking them with privacy, for it is most unwise to make an assertion without being perfectly certain that you are in the right in so doing; but in this case Mr. Edwards has made assertions without being able to prove them, and at the last he now asks your readers to believe him and his statements against his privacy to the contrary, for the Patent Law clearly sets forth that the inventor shall abide by his claims in his inventions, and to understand such invention he shall describe it by reference to the drawings by means of figures and letters. And upon referring to the drawing of the Eclipse Drill anyone conversant with drawings can at once see Mr. Edwards in his last letter has clearly stated what is not a fact—whether from an inclination to do so or not I cannot say, but such is the case—that the valve arrangement of the Eclipse

Drill has not seven parts, but five. I, for one, say that the seven parts are as plain upon the drawing as it is possible for a draughtsman to show them, and it is also plain that Mr. Edwards' drawing show five.—*Bayswater, Jan. 1.*

STRIKES—DEVON GREAT CONSOLS.

SIR,—In his remarks on strikes Mr. Symons continues to overlook the important fact that undesirable as these extreme measures undoubtedly are in a variety of instances, still there are occasions when a manly conscientious resistance of the overbearing power of employers is perfectly just and commendable. As is observed by an eminent impartial writer on this subject, it may be taken as a general principle that the employer is not only superior in wealth, position, and credit, but in intelligence and education, and in his relation to other classes he has almost invariably the prima facie arguments of a good coat and clean hands—advantages of which he must bear the responsibility. He stands in the position of a civilised nation opposed to a less civilised one, and is bound by all the laws of morality to be all the more judicious, magnanimous, and considerate. Taking these as sound arguments it is difficult to see how Mr. Symons can with any degree of reason or justice continue to cast harsh reflections on the men of Devon Great Consols for having taken a firm stand against an act which has been utterly condemned by all classes of society, and which stand on the part of the men was made in such a peaceful temperate manner as to excite the admiration of the whole of the mining interest. It will it is hoped be doing Mr. Symons no injustice to mention the well-known fact that in his native county he stands strangely alone in his opinion with regard to the successful effort made on behalf of the men of the two western counties by the men of Devon Great Consols.—*Dec. 31.* A CORNISHMAN.

DEVON (REED) SILVER-LEAD MINE.

SIR,—Will you allow me to state, for the information of "C. E." and any others whom it may interest, that the main lode has been worked up to the boundary. [Mr. Salmon enclosed a sketch, which we are, of course, unable to reproduce, but his description is perfectly clear without it.] It is drained by an adit to the depth of 50 fms., and is standing 3 fms. wide, and for a length of 40 fms. standing untouched within the royalty. The next portion has been worked for a distance of 90 fms. to a depth of 70 fms. from the surface; and, as I mentioned in a former letter, the richness and extent of the halvans prove that a large quantity of silver-lead has been taken out of the mine. At 66 fms. further the ground is virgin. There are besides the above 200 fms. in side lodes, drainable to a depth of 60 fms. by the low adit, and standing untouched, so that "C. E." will perceive there is a vast field for profitable mining. I may also state that the railway is within a mile of this mine. This is a very important element in the question of cost in bringing the mineral to market.—*Ulverston, Jan. 2.* WM. SALMON.

MEDLYN MOOR MINE.

SIR,—What I read in the Journal of last week, from "Cousin Jack's Unpublished MSS." concerning the rich deposit of tin found in the above mine, brings me in remembrance of what I saw there when passing some years since—perhaps eight or nine. Some men while engaged making a water-wheel pit discovered the outcrop from a lode—the largest I ever saw; this I think was about 50 fms. north of the old account-house. Being connected with tin mining, I naturally asked the men to wash a little of the stuff from the outcrop on one of their shovels, and was very much surprised to see so much tin produced from so small quantity of stuff so near the surface. Having had a good amount of experience in tin mining in Cornwall and other places, I am sure, from the beautiful incline of the hill just above this outcrop, and from its immense size, there certainly must be a rich deposit of tin below. F. M.

WELSH GRANITE PAVING QUARRIES.

SIR,—Whilst every other branch of industry throughout the kingdom is, unfortunately, suffering from the present very depressed state of trade, the above-named was never so flourishing, or the demand so great, as at the present time.

The constantly increasing demand for the Welsh paving setts, which seem to be in preference to all others in the market, more especially those obtained from the various quarries along the shores of Carnarvon Bay from Nevil to Clynog, certainly indicates that the rocks in that district have peculiarly valuable properties appertaining to them for street paving purposes, as the demand does not, I believe, arise from the cheapness of the stone, as it seems to realise in the market more than any other paving stone, consequently it must be in the superior quality and workmanship of the stone.

A long article appeared in the Journal of Nov. 24, 1877, of a very interesting character, headed Welsh Granite, and Street Pavements, in which some very valuable comparisons are made—viz the first and ultimate costs and durability of the Welsh, Dalbeattie, Slap, and Mountcorrel granite and the Yorkshire stone, as tested at Bradford, and also the cost and life of wood pavements as against granite, from a report furnished by Mr. George M. Van Nort, Commissioner of Works of the City of New York.

The very compact and uniform structure of the stone quarried along Carnarvon Bay is said to enable English and Scotch sett makers, at the price paid in the Scotch and English quarries, to realise from 7s. 6d. to 9s. per day. On this account there is a continual increase of the production of Welsh granite, arising from a constant influx of sett makers from other quarries, where the stone is so much more difficult to manufacture, and which not only entails extra labour, but prevents a corresponding rate of wages being earned.

To provide accommodation for additional settmen the Welsh Granite Company have recently purchased 17 acres of land at a cost of 1000, an acre, adjoining the present village of Trevor, the latter consisting of upwards of 100 picturesque cottages, including a church and a commodious school, the whole of which is the property of the Welsh Granite Company (Limited). Several other quarries are about being started in this district, the most important one being immediately opposite to the Welsh Granite Company, which has recently been purchased by a well known capitalist, Mr. J. H. White, of Southport. Operations are about to be resumed here upon a large scale, the contract for a new tramway, incline, planes, and loading jetty having been taken by Mr. Hunter, of Brace Bridge, Lincoln. The proprietor, Mr. White, is already negotiating for building plots; Mr. Spargo, of Bangor, is also at work in this district (Clynog).

The next district of importance is Nant Porth, where Messrs. Kneeshaw and Co. have so recently purchased the Port Nant Quarry, and have already expended and are expending large sums in building cottages. This quarry has been in operation a long time, and the stone is known as one of the favourite Welsh granites, the principal streets in Liverpool having just been paved with it. This peculiarly valuable stone seems to be confined to the small bay of Nant, which is entirely secured (where this stone exists) by Messrs. Kneeshaw and Co. and Sir Llewelyn Turner, consequently no competition in the supply of this stone against these two quarries can occur. In the portion of the bay belonging to Sir Llewelyn Turner, which is the most sheltered part, the stone crops out to the surface immediately above high water line, and ledges back for some hundreds of feet in height, forming an exceptionally advantageous quarry site, where long inclines and inland carriage will be dispensed with, and vessels come close up to the workings for cargo.

The Nevil Granite Quarry Company have also purchased land for building purposes, and are vigorously extending their workings; this quarry, although originally commenced on a small scale, is destined to become ere long one of the principal quarries of the Principality. All the suitable quarry sites are, it seems, under lease from Clynog to Nevil.

In such times as we are now witnessing, Sir, many of your readers will welcome with pleasure the news of the opening out of such a field for labour along the banks of Carnarvon Bay, where in a few years hence 4000 or 5000 hands will certainly find remunerative employment and suitable accommodation and nourishment for their

families. The demand for the granite from this district seems almost unlimited. There are generally from seven to twelve vessels from 100 to 200 tons burden lying inside the Welsh Granite Company's pier waiting for freights for nearly all parts of the United Kingdom. It would well repay capitalists to visit these quarry districts, as a safer or more remunerative channel for investment will hardly be met with.

A VISITOR TO THE CARNARVON BAY QUARRY DISTRICT.

Jan. 2.

LEAD MINING IN FLINTSHIRE—HALKYN MOUNTAIN.

SIR,—In these times of dulness and depression in almost every branch of trade it is pleasant to be able to point to one bright speck in the otherwise gloomy horizon—I refer to the recent great discovery of ore in the Prince Patrick Mine. About four months since you kindly inserted a letter for me, in which I called particular attention to the prospects of Prince Patrick, and I predicted that before long a great discovery of ore would be made; this I am pleased to say has been fully realised, and during the last two months about 15 fathoms have been driven through a magnificent body of ore, the drive alone having yielded over 80 tons of lead, and in the end of the level there is now a rib of ore nearly 2 feet wide, solid lead. One cross-cut has been made to prove the width of the lode, which is 15 ft., and worth 12 tons of lead per fathom. The present returns, 10 tons per month, can easily be increased to a considerable extent, but at present nothing is being done by way of stopping, the proprietors having decided to lay open a large reserve of ore ground for permanent dividends. By this mode of working handsome profits are now being made, and I am informed a dividend will be declared early in 1879. It is to be hoped for the sake of such mines as North Hendre and Prince Patrick that the price of lead will speedily advance, when no doubt the output would be so increased as to give larger profits than ever.

Dec. 31.

MINING ENGINEER.

CORNISH MINING, AND ITS UNEXPLORED GROUND.

SIR,—But little has been done within the last twenty years by way of prosecuting new mining ground in the county of Cornwall, which is to be wondered at seeing the immense resources capable of being produced by the development of its new or unwrought ground. It will suffice to give the outside public an idea of the value of mineral properties around the granite hills of Carnmarth and Carn Brea by stating that in an area of seven miles east and west, by two and a-half north and south, comprising parts of the districts of Camborne, Redruth, and Gwennap, the sales of copper and tin for the last 70 years, according to statistics now before me, amount to 32,297,472 lb., the greater part of which was found by shallow and inexpensive mining, the richest deposits being generally less than 150 ft. from the surface. Compressed within the limits of this "hotbed" of mineral wealth are sections of unexplored ground requiring only the operation of the miner on a small scale to open out riches equal in magnitude to any yet found. It is around the granite upheaves that by far the larger portion of the mineral wealth of Cornwall occurs. In places at the foot of these hills may be seen at surface elvans of a highly crystalline character in close connection with copper lodes, the surface outcrop of which shows go-sen such as have never been known to fail leading to a rich deposit of copper ore, a well-directed capital of 50000, being sufficient to test its value. Happily for mining generally the day for high premiums and promotion money having passed, the ground in question has been taken, and will be offered on the principle of equitable co-operation, thus returning to the old system under which Cornish mining flourished, and those connected with it became opulent. The yield of Cornish mines from the year 1723 to 1874 amounts to 110,968,497 lb., with equally good mines left for succeeding generations.

Cornwall, Jan. 1.

CHAS. BAWDEN.

ROOKHOPE LEAD MINING COMPANY.

SIR,—I beg to request you to allow me a little space in your esteemed Journal to reply to some remarks made by Mr. Edwards at the general meeting of the shareholders of the above company, held Nov. 27 this year, wherein he says—"The directors were unfortunate in the early part of the year in engaging a person to take charge of the dressing floors, from whose efforts they expected a great improvement in the results, but they were deeply and grievously disappointed with the results of his operations during the short time he was on the mine, and the directors were obliged to accept his resignation." And he further remarks, "That the board has engaged a Mr. Davidson, from whom they expected something good, but up to the present time that hope has not been realised." Now, such declarations of the incompetency of the company's dressers has become so common of late with the directors as a justification for the non-fulfilment of their promises, that it cannot fail ere long to strike the shareholders with its oddity, and it is most unfortunate for them that their directors have not been able to select a competent dresser, when the possession of such a person at the mines would so increase the returns as to place the mine in a dividend position. Would it not be well for the shareholders for the directors to institute an investigation into the state of the mine, when it would come to light whether the fault lies in the manager, dresser, or the pooriness of the lode; for it cannot but be very provoking to the shareholders to find always a balance on the wrong side of the sheet when they are repeatedly assured that they have a rich mine. Mr. Edwards seems to forget that I was at the mine but a little over two months, during which time I had to wait over a month before any of the machinery which I ordered arrived, the erection of which was nearly ready when I left, and I see from the *Mining Journal* it is successful. During the time I was there large quantities of rubbish were drawn to surface containing little or no lead, but a very fair sample of the reserves I saw in the mine. The shareholders have often been informed that I promised to return 80 tons of ore per month, but I notice the shareholders were not informed that this promise was given conditionally. My promise was that if the stuff drawn from the mine contained 4 per cent. of lead, and there was a sufficient quantity of it brought to surface, I could with a few additions and improvements to the present machinery dress 80 tons per month, but nothing near this percentage of lead was in the stuff I receive, and it was, therefore, impossible for me to take it out, no matter how good appliances I had for the mechanical treatment of the same.

F. R. W. DAW.

AMERICAN PATENTS.—Some important rules referring to mistakes in patents have been issued from the United States Government Patent Office. Mistakes through the fault of the office, and not constituting a legal ground for re-issue, are corrected by a certificate signed by the Secretary of the Interior, countersigned by the Commissioner of Patents, and sealed with the Patent Office, which certificate is endorsed on the letters patent, and duly recorded; where the mistake constitutes sufficient legal ground for re-issue the re-issue is made, mistakes alone corrected without charge. Mistakes not through the fault of the office cannot be corrected after the letters patent have been delivered to the patentee or his agent. Except as above provided, no change or alteration can be made after delivery.

BRITISH TRADE MARKS IN AMERICA.—It appears that some 300 British trade marks have been registered in the United States under an old treaty of 1794 between the two countries, which has been long since abrogated. For two years registration was stopped until a new treaty between Minister Pierrepont and Lord Derby was framed. The question soon after arose as to the validity of registrations previously to Secretary Chandler's decision in 1876, and the Courts have decided against them, but with great liberality the Government Patent Office has decided to re-register upon application without charge regarding the original registration as an office error.

MORE CURES OF THROAT AND CHEST DISORDERS BY DR. LOCOCK'S PULMONIC WAFERS.—From Mr. Midgley, 100, Wellington-road, Toxteth-park, Liverpool, Dec. 12, 1878:—"As a preventative to throat and chest affections, and all bronchial disorders, they are invaluable; they give instant relief."—Sold by all druggists, 1s. 1½d. and 2s. 9d. per box.

Meetings of Public Companies.

THE COLONIAL BANK.

The eighty-second half-yearly general meeting of proprietors was held at the head offices of the bank, Bishopsgate-street, on Thursday, Mr. T. D. HILL in the chair.

Mr. JAMES CLARK (the secretary) read the notice convening the meeting, and the subjoined report of the directors:—

As required by the charter, the directors submit to the proprietors the usual statement of the debts and assets of the corporation on June 30, including the net profits made during the half-year ending at that period, as follows:—

| DEBTS. | |
|--|---------------|
| Circulation | £ 491,516 5 0 |
| Deposits, bills payable, and other liabilities | 3,088,157 8 9 |
| Paid-up capital | 600,000 0 0 |
| Reserve fund | 90,000 0 0 |
| Balance of profit from last half-year | 1,114 8 11 |
| Net profit for the half-year | 37,777 0 10 |

Total ... £4,248,565 3 6

| ASSETS. | |
|--|----------------|
| Specie | £ 276,093 4 1 |
| Due to the bank in the colonies, on bills discounted and purchased (including those past due), &c. | 1,536,871 9 11 |
| Due to the bank in the colonies on current accounts | 19,667 15 2 |
| Due to the bank in London on bills remitted, cash at bankers, &c. | 2,417,940 3 7 |
| Bank premises and furniture in London and in the colonies | 8,082 10 9 |

Total ... £4,248,565 3 6

The directors now recommend that out of the net profit, amounting, after providing for all bad and doubtful debts, and for income tax, to £37,777 0 10 Added to the amount brought forward ... £38,891 9 9

An ordinary dividend be made of 6 per cent. upon the paid-up capital for the half-year ending June 30, which will require ... £38,891 9 9

And that the balance of ... £2,891 9 9 Be carried forward to next half year, leaving the reserve fund at £90,000.

The directors regret the continued depression in the sugar market, referred to in their last report, whilst the severe drought in British Guiana has added to the difficulties of all connected with that colony.

In addition, heavy mercantile failures have occurred, by which the bank has sustained losses, but it is satisfactory to the directors under these unfavourable circumstances to be able to recommend the payment of the ordinary dividend of 6 per cent. for the half-year, having amply provided, as they believe, for all bad and doubtful debts.

The directors may add that the general accounts from the branches are satisfactory.

The CHAIRMAN said that they must be aware of the serious depression of trade, from which the West Indian colonies have not been exempt; he thought, therefore, that they would be satisfied with the report that had just been read, and with the dividend, although without the usual bonus. On one or two occasions he had mentioned that the gross profit had not been so large as they could wish. He was glad to be able to tell them that there had been a slight improvement in the current year, but there had been no general improvement. They alluded usually to the sugar trade, because it was of paramount importance in the West Indies, where they were still labouring under difficulties, arising from the encouragement and protection given to beetroot sugar in Europe. Sir R. Peel and Mr. Cobden were opposed to monopolies of all kinds, and contended that every country ought to take every product from that country which could produce it best and most cheaply. At present in some European countries the opposite principle was being followed, and now the British consumer was virtually compelled to take the inferior beetroot sugar, although the West Indies were able to produce sugar better and cheaper than Europe. And the West Indies had to submit to a reduction of their profits in consequence of the bounty given to beetroot sugar. This he was glad to say was their only drawback, for the bank's position was as sound as possible. He was not surprised, considering what had recently transpired with regard to banks, that there had been applications as to the liability of the shareholders. He was glad to be able to inform them that the bank was under a charter long before the Limited Liability Acts were thought of, and their position had since been confirmed by acts of Parliament. There was no doubt that under their charter they were liable only for the amount of their shares. He would, however, ask the secretary to read the clause of the charter bearing on the point.

Mr. CLARK then read the clause from the charter, which is a charter of the usual form, giving the bank the right to sue and be sued in its corporate capacity, so that no individual shareholder is officially known to the public, and the clause in question states if the incorporation shall become insolvent the shareholders shall be liable to be called upon for the full amount of stock held by them, although the full amount shall not have been called and paid up.

The CHAIRMAN then proposed the adoption of the report, and Mr. HENRIQUES seconded the motion.

A SHAREHOLDER said that the Chairman had referred to some special losses, but he could not understand why they should sustain any losses if they were properly covered although failures might take place.

The CHAIRMAN explained that there had been two failures in this country in which the bank had been interested. In one the bank would sustain very little loss, and in the other the loss was more serious, partly due to the difficulty in realising estates in Demerara and Jamaica.

A SHAREHOLDER enquired whether there would be any objection in mentioning the names of the failed firms?

The CHAIRMAN did not see that there would, as their names had been before the public. They were Cottam, Mortan, and Co., and Hardy Brothers and Co.

A SHAREHOLDER enquired whether the estates mentioned were included in their assets, as he thought they should be put down at what they would probably obtain from them?

The CHAIRMAN said they were not included in the assets at all; the losses upon them were written off and done with.

Mr. BRAVO explained that the losses were on bills receivable, so that the bank had never more than an indirect interest in the estates.—The report was then unanimously adopted.

Mr. HENRIQUES, in seconding the resolution sanctioning the dividend proposed by the Chairman, said that he was sure that the proprietors must all be satisfied that they had earned the dividend after providing for bad and doubtful debts.—The resolution was unanimously adopted.

The retiring directors—Messrs. Henriques, Marryatt, Miller, and Admiral Whish were re-elected, and C. Andrew Prescott, was elected director; Mr. J. Marryatt was re-elected, and Mr. H. P. Powell was elected auditor. The usual vote of thanks, proposed by Mr. BRAVO, and unanimously carried, terminating the proceedings.

THE RUSSIAN (VYKSOUNSKY) IRONWORKS COMPANY.

The annual general meeting of shareholders was held at the company's offices, Pinner's Hall, Old Broad-street, on Friday. Mr. Wm. AUSTIN (the Chairman) presided, and in moving the adoption of the report, an abstract of which appeared in last week's Journal, referred with regret to the retirement of Mr. Mackenzie, their manager. They were negotiating for the services of a gentleman at present in the employ of another company, who would enter their services as soon as possible. Meantime, Mr. Clarke, their secretary, was acting as manager at the works. Their rouble had been taken at the same figure, 24d., as it was a far more simple plan. The only item in the accounts which caused the directors any anxiety was the state of the collection of the obrok, or rent, from the peasants. They owed a considerable debt to the Russian Government, which they inherited from their predecessors, and on which they paid interest, and they had looked forward to the peasants' rent balancing this interest. Of late years there had been considerable difficulty in collecting the rent, and they feared that a certain amount of the arrears would be irrecoverable. They were about to take advantage of the law enabling the Government to redeem this ground rent by a certain payment in Government paper, and if they received it the amount would go in reduction of their debt to the Government. If, too, this rent were redeemed, they would be relieved from the onus of collecting it. There was no doubt that the state of trade in

Russia was decidedly better than it was 12 months ago, and this gave them hopes for the future. They were unable that day to recommend a dividend, but they hoped on a future occasion to be more fortunate. During the war they were quite unable to sell their products, and the Government had generously extended to them the privilege of obtaining advances from the National Bank to an amount not exceeding 400,000 roubles. Up to the present they had availed themselves of this offer to the extent of 291,000 roubles. With regard to their old debts due to the Government, the total amount, the payment of which had been postponed, was 179,528 roubles, the amount paid during the year was 44,439 roubles, and a further sum of 44,882 roubles would be paid on Jan. 1 next. An instalment of 25,000 roubles, which they ought to have paid on the 1st ult., off the 250,000 roubles advanced to them by the Government for the railway, remained to be paid on Nov. 1 next. When they had cleared off this 250,000 roubles they would be in a much better financial position. The monthly returns which they received certainly gave them hopes for the future.—Mr. SANGSTER having seconded the motion, some discussion followed, and, in reply, the CHAIRMAN said all the debentures were issued at par, and the rate of interest was 10 per cent.

Mr. C. F. KEMP (Messrs. Kemp, Ford, and Co.), the auditor, explained that the item of exchange account (22,450/.) on the credit side of the balance-sheet was treated on the present occasion as it always had been. From the beginning of the company the value of this item in the accounts was invariably stated to the shareholders. It did not affect the value of their property, but the directors could not extinguish it. If the rouble improved in value the item would gradually disappear.

The report was then unanimously adopted, and the retiring directors and auditors were re-elected.

FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.

The annual meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Tuesday.

Mr. THOMAS EYRE FOAKES in the chair.

The report and accounts were taken as read.

The CHAIRMAN said he was happy to be in a position to say that the reports which were received by the mail which arrived yesterday (Monday) were very satisfactory. The mines were going on very well, and he would presently read some extracts from Mr. White's letters which he thought would probably be interesting to the shareholders. The shareholders would, perhaps, remember that at the last meeting—about 13 months ago—the history of the company was brought up to about the end of June, 1877. The accounts then presented went as far as December, 1876, but it would be remembered that at that time a very severe revolution was in progress in New Granada which disorganised the whole state of affairs, and the directors were not in possession of information sufficiently lucid to bring the accounts up to June 30, as they would have liked to have done, they were, however, then able to tell the shareholders something about the position and prospects of the mine. At that time it was believed that the mines had not suffered so much from the revolution as was since found to have been the case. The revolution lasted nearly 12 months, and during that time the company lost a great number of their men by conscription, and those who stayed at the mine had to play hide-and-seek to escape being pressed into the Government service as soldiers. In consequence of this some of the mines were left wholly unprovided with labour, and he need not tell the shareholders that in mines like these this had entailed a great deal of time and expense to get the mines in proper working order again. A considerable monthly expense had been occasioned by this stoppage, but he hoped that that was now almost at an end, and he thought they might certainly congratulate themselves on the very large amount of remittances they had had during several of the past months. In two months, May and June last, there was a profit of about 1500/., after paying the whole of the expenses. There was no reason why that profit should not be continued, but increased; but, unfortunately for the company, they had had as manager of their mines in America a gentleman, no doubt very honourable, but who evidently was not thoroughly conversant with the modern ways of mining, nor was he up to the management of steam power and machinery, and the result was that he did what any foolish native miner would have done under the circumstances. He found in the Silencio Mine (one of the richest mines) an immense percentage of gold to the ton, and instead of sinking shafts in the proper manner to work the deposit, he sunk to only a sufficient depth to enable him to drive two levels, and the result was that the two levels soon met. While the driving was in progress they had very large remittances—during two months—but all the ore was soon worked out of the top of the level, and the large produce of coarse temporarily ceased. The directors had their attention drawn to Mr. Barreche's mode of operation in November of last year, and immediately after the last annual meeting of shareholders the directors wrote to the then local directors, Messrs. Restrepo, on the subject, giving instructions for the future working of the property. It was evident that Mr. Barreche, however excellent and proper in other respects, was not the sort of manager that this company wanted; but in Mr. Robert White they had a clear-headed and experienced man. At the time of which he was speaking Mr. R. White was only the consulting manager, and Messrs. Restrepo and Mr. Barreche settled between themselves what was to be done. They did not give Mr. White such a position as would enable him to compel works to be carried on in any particular way, it was really a case of two to one. It is true they asked Mr. White's advice, but they did not follow it. He (the Chairman) had written to Messrs. Restrepo, and had enclosed a printed copy of Mr. White's report, with notes and observations written in giving the views of the directors on what Mr. Barreche's report. This was on Jan. 9th, 1878, and he was sorry to say that they had met with a good deal of difficulty in endeavouring to have these arrangements carried out. Messrs. Restrepo said Mr. Barreche would not work under Mr. White, and as the directors felt that Mr. White was by far the better man they decided that he should stay, and that if Mr. Barreche did not like to be the sub-manager he must go. Mr. White, not having received the intimation from Messrs. Restrepo that he was to be made head manager, went away to another part of the States, and unfortunately fell ill there. He was now, however, better, and Mr. Barreche having left the company's service, Messrs. Restrepo were now acting only as the company's bankers, and their capacity they were willing to aid in the affairs of the company in every possible way. Mr. Franklin White (Mr. Robert White's brother) had been placed in charge of the company's mines until Mr. Robert White was able to assume the management. He (the Chairman) had gone rather fully into the details of this matter, as it seemed necessary to account for the very long time which had taken place in making this change. The directors were so anxious about the matter that they went to the expense of 11/., in sending a telegram to Messrs. Restrepo, begging them to ask Mr. R. White to once to take charge of the mine at once, but it was alleged that the telegraphic communication was broken between Medellin and Mr. White's then residence, and in consequence Mr. White did not hear of the telegram until two months after its dispatch. He had not disguised the annoyance he felt at this delay, which had put off Mr. White's arrival at the mines until Oct. 20. He was very much vexed about it, but at a distance of 5000 miles it was impossible for the directors speedily to control matters of this kind. The shareholders would have seen from the report that the profit for the half-year ending June last was 4650/., 11s. 3d., as against 3300/., 18s. 6d. in the corresponding half of the previous year, and a loss of 1165/., 15s. In the half year ending Dec. 31, 1877, the mines were now in a position to go on progressively and permanently. He then read to the shareholders some extracts from the latest letter received from Mr. White, which was received by the mail on the previous day, as he thought it was best to let them have the manager's own words. The letter was dated Nov. 11, and he called special attention to the statement that in part of the Silencio Mine the yield of gold was 6 ozs. to the ton, which was a wonderful produce when it was remembered that the St. John del Rey yield was about 1/2 oz. to the ton. With respect to a suggestion that 150/., or 200/., profit a month could be made by dealing with the gold in New Granada, the directors did not want to have any speculation in the matter. If the gold could be sold advantageously over there the cost of freight and insurance would be saved; but it would not answer the company's purpose to adopt an irregular and speculative system for the sake of securing a small increase of profit. He thought they might be satisfied that they had now the right men at the mines in Mr. R. and Mr. F. White. They had everything they wanted, and they were now in a position to effect a saving by buying their own tools, as they were perfectly independent of everybody in regard to money. Everything was now being placed upon a business-like footing, such as the natives did not seem to understand. As an instance of what goes on in the neighbourhood, he might mention that it was the general opinion there that the mines were only good at surface. This opinion arose from the fact that the old Indian workers were only good at pumping machinery, could only work to a certain depth, and were these obliged to abandon their workings; but in the Silencio Mine the deposits certainly increased in richness in depth, and it was found that the case in perphyritic formations, although in the granite formations the gold lies nearer to the surface. He had hoped to be in a position to recommend a dividend at that meeting, but this could not be done. He believed, however, that at the end of January they would be in a position to give the shareholders a dividend. This was, trusted thereafter that dividends would be regularly paid quarterly. This was, of course, an individual opinion, but if anything like what Mr. White reported they would certainly be in a very good position. In Mr. White they had a clever, intelligent man, upon whom they could thoroughly rely, and it was satisfactory to mention that they had had an official letter from the Secretary of State of Antioquia giving the highest possible account of Mr. White. The directors had urged him not to take part in the politics of the country in any way whatever, and he had promised not to do so. Having invited comment and enquiry, he (the Chairman) moved the adoption of the report and accounts.

The Hon. FRANCIS C. DRUMMOND seconded the motion. The CHAIRMAN said it had been fixed at 400/., per annum at Mr. White's own suggestion. Then the company saved about 150/., per annum on the salary paid to Messrs. Restrepo, and as Mr. White previously received 150/., a year as consulting manager the change would only entail a very slight increase in the cost of management. Mr. R. White

was now settling matters at Medellin, and in the course of about a month he would remove to the mines, and thereafter act as chief manager, with his brother as sub-manager.

A SHAREHOLDER asked whether the mines were within a reasonable distance of each other?—The CHAIRMAN said they could all be visited in a day or perhaps two days.

A SHAREHOLDER thought the salary Mr. R. White was to receive was a very moderate one.—The CHAIRMAN said the directors made a stipulation that Mr. White should give his entire services to this and the Antioquia companies.

A SHAREHOLDER asked what was the present balance in hand?—The CHAIRMAN replied that it was about 2800/., or 2700/.. It took about 2700/., to pay a dividend of 1s. per share, and it was expected that the next remittance would yield a net profit of 1200/., or 1400/., which would enable them to pay the dividend and keep a balance in hand.

In reply to a further question, the CHAIRMAN said the October remittance realised about 1000/.. Mr. WYLD asked if it was not anticipated that there would be some heavy expenditure required for new machinery?—The CHAIRMAN replied that the only additional expense anticipated was that of two small engines for Figrto and Cecilia, which would probably cost about 200/., each, but these would not be sent until Mr. White required them. The machinery was expensive, as it had to be sent out in pieces of not more than 200 lbs. each; this was in consequence of the difficulties of mule transport to the mines.

In reply to further questions, the CHAIRMAN said that Mr. White had not been asked to give security, but they had had experience of him for seven years, and he was looked upon by all who knew him as a very honourable man. The Chairman also replied to some questions about the details of the accounts, explaining for the information of a new shareholder matters which had been dealt with at a previous meeting.

The reports and accounts were then unanimously adopted. On the motion of Mr. M. DONAGAN, seconded by Mr. TILLY, Mr. T. E. Foakes (the Chairman) was re-elected director, and on the motion of Mr. DONAGAN, seconded by Mr. NICHOLSON, the Hon. F. C. Drummond was also re-elected a director.

Mr. SCHOFIELD proposed the re-appointment of Mr. Tilly as auditor, remarking that the accounts presented by this company were the clearest he had seen for some time.—Mr. HAY seconded the proposition, which was carried.

The proceedings terminated with a cordial vote of thanks to the Chairman and directors.

ANTIOQUIA (FRONTINO) COMPANY.

The ordinary general meeting of shareholders was called for Tuesday last at the Cannon-street Hotel. At the time appointed for the meeting Mr. THOMAS EYRE FOAKES took the chair, and stated that a sufficient number of shareholders were not present to form a quorum, and such being the case it would be necessary to wait half-an-hour, and at the end of that time to adjourn the meeting in the event of a quorum not being formed.

At the end of half-an-hour Capt. NELSON suggested that, although no formal business could be transacted, it would be desirable that the Chairman should give some information regarding the mines, as probably the gentlemen present would not be able to attend the adjourned meeting.

The CHAIRMAN said he should be most happy to fall in with the suggestion. The mines were going on to a certain extent satisfactorily. Of course, neither he nor the directors could pretend that the mines had turned out as they anticipated, but judging from a report which he would read them presently he thought they were beginning to see a little daylight. This month they had a profit of 61/2. From the report which was sent out some time ago it would have been seen the directors wanted 2000/., or 3000/., more to hasten the work now in progress, so as not to have to wait for profit to spend upon capital, but even without that (supposing they could not get additional capital) he thought they could make the mines pay. What they really wanted was 2500/., or 3000/., more capital, and if they could get that they could get into a very much better position. The company owed the Frontino and Bolivia Company between 4000/., and 5000/.. Of course, that would not be pressed for, as the Frontino and Bolivia Company were their friends. The company really possessed, as it were, a house which was half completed, and in which were one or two rooms which were let out, and were producing a little rent, which was appropriated to the completing of the other rooms. If they could issue a few more shares or debentures, and get 2500/., or 3000/., more, they could then furnish the house and let it, and make a good profit. He had hoped to have seen a sufficient number of shareholders present to do something in that direction. The directors were large shareholders, and were receiving no remuneration for their services. There were 150 shareholders, some of whom were men of good standing; in fact, nearly all were Frontino and Bolivia shareholders. If they could once turn the corner and make profits a sum which would only pay 10 or 12 per cent. on the large capital of the Frontino and Bolivia would pay 30 per cent. on the small capital of this company. As regarded the Esquibar lode they could open there a fine lode. It was not the case which the directors based their calculations, but on that lode they made profits of 180/., or 190/., for three months, when they came to a cross-course, and the lode was disordered. They had to cut through this cross-course, and then to find the lode; they had not yet found it, but they believed it was there. The Carmen lode was on the opposite side of the hill to the Esquibar. A long adit was made, and the ground between was supposed to be stopped out, and now they were cross-cutting from this lode to get the Esquibar lode in depth. In a short time they would prove whether the Esquibar was good in depth, and if so they had a great mine there; but even without that the Carmen lode was a good one, and they were there making the profits which they were making. The Chairman then read a letter from Mr. Robert White, the manager at the mines. He (the Chairman), commenting upon the letter, said the farm had been a source of considerable profit, and not only had it yielded a profit, but also enabled the people at the mine to obtain good and cheap food. In future stores, tools, and utensils would be sent out from England, instead of being bought in the country, and it was believed that, by that means, cheaper and better articles would be obtained. He then read a letter from Mr. John Henry White, the mine agent. He (the Chairman) went on to say that the directors had sent out a fine rock-drill, which had been paid for, and Mr. White would report at once upon it. He might mention that the character of the Frontino lode was that it came upon a rich course of ore for some time, and then the lode pinched in, and was unproductive for a fathom or two, but still the general produce of the ore from Frontino was about 1 oz. per ton, which was good produce. The St. John del Rey got about 1/2 oz. to the ton. He thought, on the whole, they might look upon the position of the company as progressing satisfactorily.

In answer to a further question, the CHAIRMAN said the mines were the freshhold property of the company, and they included a very valuable farm, as they had cleared away a great deal of underwood. The farm assisted the mine in a small way by feeding cattle on the company's pastures, the company taking half the profit on the cattle being sold. The Antioquia property, which was part of the Frontino Mine, had given as much as 370 or 380 ozs. of gold a month; it gave per ton much larger results than the Bolivar Mine. As he had said, he believed they had a good mine there. He reminded them of what the shareholders had passed through in the Frontino and Bolivia; anyone who in 1871 had said that that property would pay a dividend would have been laughed at, whereas they were now going to make a good property of it.

A SHAREHOLDER asked whether the directors had made certain suggestions. He asked whether the directors had taken any action on those points?—The CHAIRMAN said that instructions had been given to the agent to send over every six months a statement showing the depreciation of plant. It must be borne in mind that comparatively little work had been done with the plant, and possibly that might account for no depreciation having taken place. The native managers did not understand accounts as they were understood in this country, but that matter would now be put upon a different footing, inasmuch as Mr. Robert White was at the head of the Antioquia as well as of the Frontino and Bolivia Mines, and he hoped and believed things would be managed in a very much better manner, as Mr. White was greatly interested in the work. The directors would see that the suggestions of the auditors were carried out.

Some conversation ensued as to the desirability of raising a sum of 2000/., or 3000/., and Capt. Nelson suggested that it should be put before the shareholders in some definite form, by way of resolution or circular.

The CHAIRMAN said the suggestion was a good one, and at the adjourned meeting a resolution would be proposed to that effect, that it was desirable to raise 2000/., or 3000/., upon debenture, and that as many bonus shares should be issued, as was done in the Frontino and Bolivia Company. He pointed out that the plant and stock would be ample security for any money so advanced.

On the motion of the CHAIRMAN, seconded by Mr. BAXTER, the meeting was then adjourned to Friday, Jan. 10, at 12 o'clock, at the company's offices, for the purpose of formally passing the report and accounts.

A vote of thanks to the Chairman and directors closed the proceedings.

MALPASO GOLD WASHING COMPANY.

The annual general meeting of the shareholders was held at the offices of the company on Tuesday, Dec. 31.

The SECRETARY having read the notice convening the meeting,

The CHAIRMAN stated that the shareholders would naturally expect the directors to give some reason why they had not, as usual, issued a regular report. The fact is they should not have called them together at all at this time had it not been that they were compelled to do so by the provisions of the Joint-Stock Companies Act. Under existing circumstances, the directors were advised that, pending the petition of the Rev. Mr. Peterson for the winding up of the company, it would be better not to enter into any discussion as to the present condition of the company. The directors had hoped that the petition in question would have been decided before this, but as the petitioner had chosen to cross examine the directors on their affidavit, much delay has been occasioned thereby. It was, however, believed that a decision would be arrived at in the course of the next month, and so soon as such was the case the directors would again call the shareholders together and consult with them on the affairs of the company.

The accounts as issued to the shareholders were approved and adopted.

Mr. F. HUNT: What number of the shareholders wish to wind-up

the company?—Mr. STEVENS (solicitor): We only know at present of one—the petitioner. He holds 25 shares.

The CHAIRMAN: Including the holdings of the directors replies have been received from shareholders representing 28,000/., out of 37,000/.. That they do not wish the company to be wound-up.

Mr. SNELL thereupon moved the following resolution, which was carried unanimously—"That this meeting desires to express its disapproval of the petition presented to wind-up the company, and are unanimously of opinion that the company be not wound-up, and that the directors be requested to oppose the same as vigorously as possible.

The re-election of the retiring directors and the auditors was carried, and a vote of thanks to the Chairman and directors concluded the proceedings.

MALABAR GOLD WASHING COMPANY.

The annual general meeting of the shareholders was held at the offices of the company on Tuesday, December 31.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN stated that, as he had said at the previous meetings, it would naturally be expected he should give some reason why no report had been issued with the balance-sheet. The fact was the directors would not have called this meeting at present had they not been compelled to do so by the Joint Stock Companies Act. The shareholders are aware a petition has been filed by the Rev. Mr. Peterson for the winding up of the company, and pending the hearing of the petition the directors were advised it were better not to discuss the position of the company, but merely to hold a formal meeting. It was believed the petition would come on for hearing about January 18, and so soon as the matter was decided the directors would again call the shareholders together.

The accounts, as printed and circulated amongst the shareholders, were then adopted.

The following resolution, proposed by Mr. DUNLOP, was carried unanimously:—"That this meeting, in view of the petition of the Rev. Mr. Peterson for the winding-up of this company, is of the unanimous opinion that the board of directors will best consult the interests of the shareholders by opposing the said petition as strenuously as possible."

The retiring directors and auditors were re-elected, and a vote of confidence and thanks to the directorate concluded the proceedings.

RICA GOLD WASHING COMPANY.

The annual general meeting of shareholders was held at the offices of the company, on Tuesday, Dec. 31.

The SECRETARY having read the notice convening the meeting,

The CHAIRMAN stated that the remarks he had to make were very brief. No report had been issued, because pending the petition for winding up the directors were advised that no discussion should take place upon the affairs of the company. The petition would probably come on for hearing about Jan. 17.

The accounts as issued to the shareholders were adopted, and the following resolution, proposed by Mr. DUNLOP, was carried unanimously:—"That this meeting, in view of the petition of the Rev. Mr. Peterson for the winding up of this company, is of the unanimous opinion that the board of directors will best consult the interests of the shareholders by opposing the said petition as strenuously as possible."

The retiring director and auditor were re-elected, and a vote of thanks to the Chairman and directors concluded the business.

SOUTH CONDURROW MINING COMPANY.

The general meeting of adventurers was held at the offices of the company, Austinfriars, on Thursday.

Mr. H. J. MARSHALL in the chair.

The notice calling the meeting, and the accounts, were read by Mr. JAMES HICKEY, the secretary.—The accounts showed that the balance in favour of the mine was 7248/., 4s. 11d.

Capt. RICH then read his report, which was as follows:—

Jan. 1.—Since your last general meeting operations at the Plantation shaft, such as fixing double skip-rod and doing other necessary work, as well as sinking below the 70, have been urged on. The lode in the bottom of the shaft, 5 fathoms below the 70, is worth 10/., per fathom. The double skip-rod referred to is made complete to the 50, or 80 fathoms below surface. We have also made tramroad at surface from shaft to the stamps. As soon as we have completed the skip-rod from the 50 to the bottom of the mine we intend to fix pulley stands and shaft tackle at surface with the view to haul the tinstone and debris through this shaft by steam-power. The new work at the Plantation shaft has caused considerable expense, but we hope soon to derive great benefit from the outlay, as this shaft will greatly facilitate the development of the mine. It has already given good ventilation, besides opening out a great extent of profitable tin ground.

The 93 end west is suspended, and the men set to rise in the back; the lode is worth 12/., per fathom. A rise is also being made in the back of the 93 east, which is worth 18/., per fathom. The 80 end east has passed through a poor bar of ground, but in driving the last few fathoms the lode has improved, and is now worth 8/., per fathom. The 80 is the most easterly drive, and we have a great extent of entirely unexplored ground before us in this direction. A rise in the back of the 80, some 12 fms. behind the end is worth 20/., per fathom. The 70 end east carries stones of tin; we look forward to an improvement in this end, as it is not yet extended far enough to intersect the shoot of tin seen in the rise referred to. The 70 west is extended 32 fms. west of the Plantation shaft; the lode in the end is worth 10/., per fathom, and is standing whole above this level to surface. The copper lode is some 10 fms. north of the tin lode at the 70. We are driving the 70 west on its course; the lode at present is yielding stones of good quality ore. We consider it a good speculation to open out on the course of this copper lode. In the 80, east of King's shaft, we are putting up a speculative rise to prove the tin lode and for ventilation. We have sunk a winze in the bottom of the 50 east some 6 fms.; the lode is worth 10/., per fathom, but we have been obliged to suspend the sinking on account of the water. The rise mentioned, we hope, will soon drain the winze. The lode in the back of the 50 east, directly over the winze referred to, is worth 12/., per fathom.

We are putting out a speculative cross-cut in the 50, west of King's shaft, to prove if the main part of the lode is not gone off south. The 50, west of No. 3 cross-cut, and the 50, east of the Plantation shaft, have lately been communicated, which has given good ventilation throughout the mine. A rise in the back of the 50, east of the Plantation shaft, is worth 35/., per fathom, and the lode standing whole to surface over 100 fathoms when measured on its dip or underlie. The 50, west of Plantation shaft, carries stones of tin. We have driven a short cross-cut north of Plantation shaft at the 50, and intersected the West Basset lode; it is about 2 ft. wide, and carries stones of copper; we are now driving west on its course. The 40, east of engine-shaft is worth 6/., per fathom. The 40 west is worth 7/., per fm. We have recently communicated the rise in the back of the 40 with the 30 fathom winze, and thereby given good ventilation. The lode in the 30 east has a strong and kindly appearance, and is worth 12/., per fathom. A rise in the back of this level is also worth 12/., per fathom; the lode here is standing whole to surface. We would observe that the rise in the 30 is 145 fms. east of the rise referred to in the 50 fm. level at Plantation shaft, which is worth 35/., per fathom.

The stopes and pitches throughout the mine are yielding fair quantities of tin. We, however, greatly deplore the continued low price of the metal. Notwithstanding these times of severe depression, we are keeping on a great deal of new and speculative work, with the view not only to give employment, but to properly develop the mine, and which is opening out well; and, taking into consideration the severe depression of the times, we trust the profits derived from the working of the mine will be deemed satisfactory.—WM. RICH, WILLIAM WILLIAMS, HENRY ABRAHAM.

The CHAIRMAN said that the committee were glad to meet the adventurers again, and he was only sorry that there was not enough interest taken to make a larger meeting. He hoped the shareholders would consider the report satisfactory; he also hoped they were pleased with the manner of keeping the accounts. The holding of the meeting had been deferred till the fifth month in order that the accounts might be made out for the year, and that the accounts of the financial year might be wound-up to-day. This course had met with a considerable amount of disapproval in Cornwall, because, he supposed, it was thought that the company could not scoop up a dividend for the four months, and that another month was wanted to take out the tin and give a dividend. He thought the company was too humdrum to meet the views of those gentlemen. The committee did not come to these meetings to give the shareholders sensational matters to talk about, but they simply came and submitted the accounts and declared a dividend, and those people did not appear to look upon the company with favour. The committee could not help that. They had taken the course which they thought would best suit the views and the interests of the shareholders, and he hoped they approved of it. (Hear, hear.) The amount of tin sold during the year had been 846½ tons, which had cost 20,218/., to produce. They had sold 66 tons and a little over of copper, which had cost about 340/., to produce. The tin had realised 31,364/., 10s. 6d., and the copper 452/., 2s. 1d., making a total income of 31,816/., 11s. 7d., giving a balance of profit on the year of 11,259/., 15s. 5d. Out of the gross profit they had paid dues 1221/., 15s. 3d.; land damage, 100/.; they had already divided 4858/., 8s., and the committee meant to propose for their acceptance to-day a like amount for the remainder of the year, making the amount divided for the year 9798/., 15s., which showed what had been done with the gross profit. That would leave a balance of 131/., 2s. to add to the floating balance, which would then stand at 2349/., 15s. 11d. He thought that was a statement which would please most people considering the times, which were bad, from which everybody must suffer. Tin, the metal which they produced, was like everything else—at a reduced price. He hoped and believed that they had now seen the worst, and the committee proposed to devote

port, that the amounts set aside were larger than the accountants brought out, being 46,400. The value put upon the Benhar and Niddrie Collieries at 67,000, was entirely erroneous. In a time like this to attempt to capitalise the value of any work of this kind appeared to him to be perfectly foolish. There were ironworks lately making 600,000, a year, and now they would hardly get the value of old iron for them. Collieries were very much in the same position. The one set of engineers estimated the quantity of coal at Benhar at 370,000 to 400,000 tons, while the others placed a portion of it only at 270,000 tons. At present they were making 1s. 11d. per ton profit, which is very good indeed in such times. Regarding Mr. Clark's report on the Niddrie Colliery and its valuation, they were also equally erroneous. The great seam was the only one being worked there at present, but they had two seams of coal, and blackband ironstone associated with parrot coal, which, when pig iron became dearer, and blackband improved in price, would also be worth working. To get at this seam they had simply to cross-cut the mine. They have also the south parrot coal, which will pay to work as soon as a central drawing point is made in the great seam. Then they will be able to draw from either side, and get a larger output at a reduced expenditure. The other engineers reported that the works could go on for nine years at the present rate of output without increasing the outlay, and this was more likely to prove the correct state of affairs. By a very simple alteration of the existing plant, or an addition to it, they could drive the cross-cut, command a large quantity of blackband ironstone, parrot coal, and excellent house coal. When this improvement is carried out, and the pumping-engine now being erected is fairly in order, the Chairman considers the Niddrie field should prove one of the best collieries in Scotland. During the last month (November) their net profit, notwithstanding all the disturbance of affairs caused by the stoppage, was 20000, and he did not believe any other colliery in Scotland, out of its simple sale of coal, could show any such favourable result. Another gentleman at the meeting, who had 20 years experience in colliery matters, expressed his approval of these estimates.

After this meeting the board of directors of the company issued a circular stating that they think the motion for carrying on the company without liquidation appears to them to present a fair basis of arrangement between shareholders and creditors. Creditors to a considerable extent have already approved of it. They point out that in liquidation the creditors could not look for a speedy realisation and settlement at a time of universal depression like the present. To carry on the business in the meantime in the best way must, therefore, be the common object of both interests. They recommend that the capital be increased by the sum of 100,000, in 20,000 preference shares of 5s. each. Interest 7½ per cent. minimum and accumulative. These shares are to be redeemable after four years at 25 per cent. premium, on six months notice. Shareholders are requested to say how much of this new stock they will take, and creditors can also have allotments of it fully paid-up in exchange for a corresponding amount of debt. The advantage to creditors who take shares is, of course, that they will have a stock which they can either retain or put upon the market, as suits them. This new stock merely takes the place of existing debts, and the dividend on it will not, therefore, be an increase to the company's burdens. Another large circular of 32 pages has also been issued, containing the most important recognitions taken by the committee of investigation, but it does not call for any comment.

The following calculations show the yield per cent. on the money invested at present prices in the shares named, based upon the last average yearly dividends being maintained:—In coal and iron works Arncliffe would yield 12½; Bolekew, Vaughan, A. 5½; Cairnstable, 14½; and Muntz's Metal, 7½. In oil companies Dalmeny would yield 15; Oakbank, 8; ditto new, 7½; Uphall, 4½; and Young's Paraffin, 11½. Phospho-Guano would yield 10½; Scottish Wagon, old or new, shares, 6½; Tharsis Sulphur and Copper, 8½; ditto new, 8½; Price's Patent Candle, 7½.

DERBYHAVEN TRIAL COMPANY.—From all appearances, this company's prosperity is going to be a grand one, and investors will not again have a chance to get an interest in it on the present terms offered. The stuff being got out of the lode at the forebreast fired lately is a large ball of mineral, mixed with pretty veinstuff, flouken, and gossan. The ground is rapidly getting steady. The vein is 2 to 3 ft. wide, with splendid cheeks and beautiful crystal spar, richly diamonded, and bespangled with copper and variegated crystals. They are evidently close up to a great discovery, and very little will be required to be spent to obtain it. At any moment they may strike a body of ore in the 40, which all the indications point to. The mine would then be one of the best in the kingdom, for they would have 40 fms. of stopes or ground, every inch of which bears ore through. The work already done on the mine in sinking shafts and driving levels has been most judiciously watched over, and the money expended has gone just about twice as far as it would at other mines. The value of this pioneer labour and machinery, &c., in ordinary times would very fairly be 10,000, to the purchasing company, but the amount desired for it is now reduced to 50 000, which proves that everything is being made fair and favourable for investors. Investors should, therefore, not be afraid to join on so favourable opportunities, which it is impossible they could obtain at any other time than one like the present, so unpropitious for the immediate floating of public companies. The vendors show their perfect confidence in the property in a practical manner by not requiring the purchase-money till the mine from ore sold returns 5 per cent. on paid up capital. There is, in short, no doubt the stuff is there, and before the company is going two months the most gratifying results will be met with. The capital, though modest, is still quite simple, being 15,000, in 3s. shares.

| Per share. | Dividends. | Rate per cent. | Description of shares. | Last price. |
|------------|------------|----------------|--|-------------|
| up. | Previous. | Last. | | |
| 10 | 10 | 10 | COAL, IRON, STEEL. | |
| 10 | 10 | 10 | Arncliffe Coal (Limited) | 90s. |
| 10 | 10 | 10 | Benhar Coal (Limited) | 16s. 6d. |
| 10 | 10 | 10 | Bolekew, Vaughan, and Co. (Lim.) .. | 47 |
| 10 | 10 | 10 | Cairnstable Gas Coal (Limited) | 7 |
| 10 | 10 | 10 | Chillington Iron (Limited) | 50s. |
| 10 | 10 | 10 | Clyde Coal (Limited) | 45s. |
| 10 | 10 | 10 | Ebbw Vale Steel, Iron, and Coal (Lim.) | 75s. |
| 10 | 10 | 10 | Fife Coal (Limited) | 55s. |
| 10 | 10 | 10 | Glasgow Port Washington Iron & Coal (L) | 35s. |
| 10 | 10 | 10 | Ditto Prepaid | 35s. |
| 10 | 10 | 10 | Lochore and Caplebras (Limited) | 40s. |
| 10 | 10 | 10 | Marbella Iron Ore (Limited) | 32s. |
| 10 | 10 | 10 | Monkland Iron and Coal (Limited) .. | 16s. |
| 10 | 10 | 10 | Ditto Guaranteed Preference | 40s. |
| 10 | 10 | 10 | Nant-y-Glo & Blaenau Ironworks (Lim.) | 20 |
| 10 | 10 | 10 | Onna & Cleland Iron & Coal (L. & R.) | 2s. 6d. |
| 10 | 10 | 10 | Scottish Australian Mining (Lim.) .. | 35s. |
| 10 | 10 | 10 | Ditto New | 16s. 3d. |
| 10 | 10 | 10 | Shotts Iron | 60 |
| 10 | 10 | 10 | COPPER, SULPHUR, TIN. | |
| 10 | 10 | 10 | Canadian Copper and Sulphur (Lim.) .. | 5s. |
| 10 | 10 | 10 | Cape Copper (Limited) | 29½ |
| 10 | 10 | 10 | Glasgow Caradon Copper Mining (Lim.) | 16s. |
| 10 | 10 | 10 | Ditto New | 13s. 6d. |
| 10 | 10 | 10 | Huntington Copper and Sulphur (L.) .. | 12s. 6d. |
| 10 | 10 | 10 | Panullicle Copper (Limited) | 20s. |
| 10 | 10 | 10 | Rio Tinto (Limited) | 52s. 6d. |
| 10 | 10 | 10 | Ditto, 7 per cent. Mortgage Bond .. | 13½ |
| 10 | 10 | 10 | Do. 5 p.c. Mor. Deb. (Sp. Con. Bds.) .. | 50 |
| 10 | 10 | 10 | Tharsis Copper and Sulphur (Lim.) .. | 21½ |
| 10 | 10 | 10 | Ditto New | 14½ |
| 10 | 10 | 10 | Yorke Peninsula Mining (Limited) .. | 5s. |
| 10 | 10 | 10 | Ditto, 15 per cent. Guaranteed Pref. | 15s. |
| 10 | 10 | 10 | GOLD, SILVER. | |
| 10 | 10 | 10 | Australian Mines Investment (Lim.) .. | 5s. |
| 10 | 10 | 10 | Richmond Mining (Limited) | 11½ |
| 10 | 10 | 10 | OIL. | |
| 10 | 10 | 10 | Dalmeny Oil (Limited) | 7 |
| 10 | 10 | 10 | Oakbank Oil (Limited) | 38s. |
| 10 | 10 | 10 | Ditto | 11s. |
| 10 | 10 | 10 | Uphall Mineral Oil (Limited) "A" .. | 81s. 6d. |
| 10 | 10 | 10 | Ditto "B" Deferred | 10 |
| 10 | 10 | 10 | West Calder Oil (Limited) | 15s. |
| 10 | 10 | 10 | Young's Paraffin Light & Mineral Oil (L) | 13 |

| 50 | 25 | 5 | 5 | MISCELLANEOUS. | |
|----|----|----|----|-------------------------------------|-----|
| 7 | 7 | 15 | 10 | London & Glasgow Engineering & Iron | 23½ |
| 10 | 10 | 10 | 10 | Shipbuilding (Limited) | 8½ |
| 10 | 10 | 10 | 10 | Phospho Guano (Limited) | 9½ |
| 10 | 10 | 10 | 10 | Scottish Wagon (Limited) | 7½ |
| 10 | 10 | 10 | 10 | Ditto New | 7½ |
| 10 | 10 | 10 | 10 | Per share | 7½ |

NOTE.—The above lists of mines and auxiliary associations are as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, January 2.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

TORQUAY PROMENADE PIER COMPANY (Limited).—Capital 30,000, in shares of 10. To construct and maintain a pier, jetty, and landing place, with all proper buildings and works in connection therewith. The subscribers (who take one share each) are—J. Pickering, Cromwell-road; F. E. Robinson, 23, Albert-square; H. Ward, 21, New Bridge-street; F. B. Costa, 35, Bernard-street; J. Hicks, 18, Laurence Pountney Hill; J. Puttick, 5, Willow Bridge-road.

ANGLO AMERICAN STEAM-SHIP COMPANY (Limited).—Capital 200,000, in shares of 25. The purchasing, chartering, hiring, building, or otherwise acquiring steam or other ships, and employing the same between any ports in any part of the world. The subscribers (who take one share each) are—C. T. Russell, Liverpool; E. Brailley, Liverpool; W. A. Robertson, Liverpool; Isaac Zaquy, Liverpool; J. Stevens, Liverpool; J. W. Davis, Liverpool; H. Burham, London. **THAMES AND ISIS STEAMBOAT COMPANY (Limited).**—Capital 4000, in shares of 10. The taking over and extending the passenger traffic on these two rivers by running steamboats for carrying passengers, and to purchase or build boats as may be required. The subscribers (who take one share each) are—H. Ashop, Peckham; G. Davis, sen., Abingdon; G. Davis, jun., Abingdon; J. H. Clarke, Abingdon; W. J. Sadgefield, Abingdon; J. A. Kent, Abingdon; C. A. Pryce, Abingdon.

ROUNDS IRON AND LIMESTONE QUARRIES (Limited).—Capital 15,000, in shares of 20. The adoption and carrying into effect an agreement between W. Pedder, London, and J. Parkinson, London. The using, working, and developing of mines and quarries of ironstone, iron ore, limestone, and other minerals under lands in the parish of Rounds, Northampton, mentioned in said agreement. The purchasing and developing other mines and quarries of ironstone, iron ore, &c. The subscribers (who take one share each) are—J. J. Stansfield, 10, Bush-lane, E.C., accountant; J. Hosking, 2p, New Broad-street, E.C., mining engineer; B. C. Hooke, Canonbury, barrister; J. Parkinson, 188, Great Dover-street, agent; E. Howell, 674, Old Kent-road, accountant; W. G. Payne, 27, Finsbury Pavement, solicitor; J. Renton, East Dulwich, commission agent.

CENTRAL RAILWAY COMPANY OF COLOMBIA (Limited).—Capital 5,000,000, in shares of 10. To acquire and carry out a contract of concession made between the Government of Colombia and H. F. Ross for the construction of the Central Railway of Colombia, a line of telegraph, and other works, and to exercise all rights and privileges of said concession. The subscribers (who take one share each) are—C. D. Fox, 5, Delahay-street; H. Kenyon, Maryport; A. Weigel, 21, Mark-lane; W. H. Reynolds, Rhoda Island; D. Macpherson, 5, George Yard; G. G. Taunton, 4, Little St. James's-street; F. A. Ornistow, 106, Cannon-street.

OLDHAM THEATRICAL AND ENTERTAINMENTS COMPANY (Limited).—Capital 10,000, in shares of 5. The purchasing or otherwise acquiring any lands, buildings, stages, scenery, machinery, furniture, dresses, &c., for theatrical and other purposes. The subscribers (who take five shares each) are—J. Buckley, Oldham; J. Hill, Oldham; H. Pemberton, Oldham; W. H. Thorpe, Oldham; J. Hughes, Oldham; B. Johnson, Oldham; J. Mellor, Oldham.

GUN, GUNPOWDER, AND AMMUNITION COMPANY (Limited).—Capital 25,000, in shares of 10. To purchase and undertake the business of the London Gunpowder Company (Limited), and to purchase or otherwise acquire the business of any other similar company, or a private partnership. The subscribers (who take one share each) are—E. W. Knapp, Brixton; J. Pickering, Brixton; J. Smith, Epsom; W. H. Pickering, 110, London Wall; Jesse Smith, 14, Queen Victoria-street; F. A. Bell, Islington; J. Morony, 1, Ampton-street.

KENT BARGE OWNERS MUTUAL INSURANCE ASSOCIATION (Limited).—The insurance by the company of the barges of its members, and of barges in which they may be interested. The subscribers are—G. S. Coulter, Farnham; F. M. Altwater, Faversham; R. Dodd, Faversham; J. D. Drake, Sittingbourne; J. Taylor, Sittingbourne; W. Dedrick, Melton; C. Wood, Melton.

LLANBERIS SLATE COMPANY (Limited).—Capital 60,000, in shares of 10. To work, win, and make slates, slate slabs, stone, rock, and earths of all descriptions, and to carry on the business of merchants and dealers in all like articles. In particular to work the Goodman and Cambrian Quarries, near Llanberis, Carnarvon. The subscribers (who take one share each) are—T. H. G. Newton, Henley-in-Arden; J. Wotherspoon, Glasgow; W. L. Lamb, Greenock; G. Lamb, Glasgow; W. Wotherspoon, Glasgow; J. Manzie, Carnarvon; W. B. Jeffrey, Carnarvon.

RECKITT AND SONS (Limited).—Capital 200,000, in shares of 100. To acquire by purchase the business of starch, blue, and blacklead manufacturers, now carried on by Messrs. Isaac Reckitt and Sons, at Kingston-upon-Hull and in London; also the lands and buildings, works, plant, &c., used for the said business, and to carry on the business of said manufacturers. The subscribers (who take one share each) are—Francis Reckitt, Hesse, near Hull; J. Reckitt, Hesse, near Hull; G. Reckitt, Forest Hill; T. J. Reckitt, Hull; T. Ferens, Hull; W. W. Tothill, Hull; G. Marsh, Hull.

HULL AND GRIMSBY MUTUAL FISHING VESSELS INSURANCE COMPANY (Limited).—The insurance of British registered fishing smacks and vessels belonging to members of the company on the basis of mutual insurance. The subscribers are—J. Sims, Hull; W. C. Cousins, Hull; H. Toozes, Willerby; J. Guzzwell, Beacontorpe; W. J. S. Hood, Willerby; H. Morris, New Place.

BIRMINGHAM CONSERVATIVE CLUB BUILDINGS COMPANY (Limited).—Capital 30,000, in shares of 50. To purchase a freehold property for the purchase of a club-house, to be erected within ten years from Sept. 1878. The subscribers are—C. Couchman, Birmingham; 3; A. Coleman, Birmingham; 2; W. M. Ellis, Birmingham; 4; G. Page, Birmingham; 4; H. R. Cozells, Birmingham; 3; J. R. Ryland, Birmingham; 3; J. Wilkes, Birmingham, 10.

SHORT BLUE MUTUAL FISHERY ASSURANCE ASSOCIATION (Limited).—The acquiring and carrying on the business heretofore carried on by the Short Blue Mutual Fishery Assurance Association. The mutual insurance amongst members of their fishing vessels against total losses. Also for observing and guiding the movements of the Short Blue fleet. The subscribers are—A. Fisher, Gorleston; E. J. Sutton, Great Yarmouth; G. S. King, Gorleston; J. G. Bass, Gorleston; J. Bates, Gorleston; E. Harvey, Gorleston; W. H. Makepiece, Great Yarmouth; J. M. Porter, Great Yarmouth.

NORTH WALES SLATE TRADE.—The utmost depression still continues in the slate trade—the staple industry of North Wales—the present condition of affairs in the various quarries being more serious than has been known for the last 20 years. At Lord Penrhyn's Bethesda quarries, where 5000 persons find employment, notices were posted on Friday stating that, consequent upon the continued stagnation in the slate trade and the heavy accumulation of stocks, work on and after Monday would be limited to four days a week. At the Llanberis quarries the working days are about to be reduced from four to three days a week, wages being again reduced; and whilst many of the smaller quarries are wholly closed, others are still working with the smallest possible staff of men. The introduction into the English market of foreign and American slates is said to have materially contributed towards the depression, and it is mentioned as a significant fact that the new Law Courts in London are being roofed with slates not from English or Welsh quarries.

ELECTRICAL INVENTIONS.—The phonograph, carbon-telephone, and other inventions of Mr. Edison, formed the subject of an interesting lecture at the London Institution on Monday evening by Prof. W. F. Barrett. After narrating Mr. Edison's somewhat romantic early life, he stated that although only 32 years of age he had taken out 300 patents, many of which, however, were intended to protect one invention. His inventions had not struck him as brilliant ideas, but were the result of patient and persistent labour. By some men, he said, Edison was regarded as a mere charlatan, and by others as a Davy, Faraday, and Tyndall rolled into one. Prof. Barrett considered the just view was between these extremes. If not a great discoverer he was at least a great inventor; and having described in detail some of his principal inventions, remarked that he had now invented a receiver capable of delivering the voice in a louder tone than it was spoken, and that in the United States they had conversed by means of his invention at a distance of 750 miles, and Prof. Barrett had himself conversed between London and Norwich.

HOLLOWAY'S OINTMENT AND PILLS—A CURE FOR ABSCESSSES, PILLS, FISTULÆ, AND SORES.—The many satisfactory cures resulting from the use of this invaluable ointment in cases where patients have been suffering from these complaints, have induced many medical practitioners to introduce them into the hospitals and their private practice; and in many instances where the sufferer was considered incurable Holloway's ointment in conjunction with his pills, healed the most desperate wounds. These remedies are unequalled for the cure of scrofula and diseases of the skin. In all cutaneous affections incidental to children, from the simple red gum to the complicated scrofulous disease, Holloway's ointment exercises a remarkably beneficial influence, soothing inflammation, relieving irritation, and giving ease to the impatient little sufferer.

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JOHN STANJAR AND CO.,

Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for

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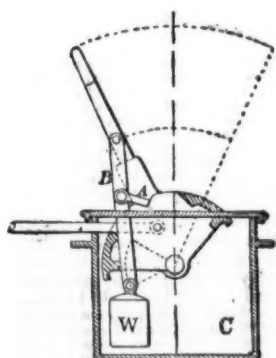
Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper

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Shipping Orders Executed with the Greatest Dispatch.

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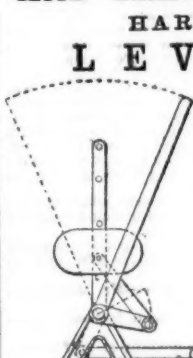
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Hartley's Patent Lever Box,

REVERSIBLE UNDERGROUND.

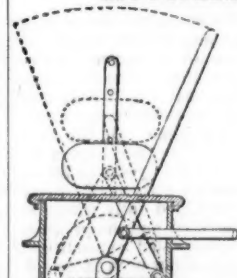
Can be set to work either way; by turning over the catch at A and reversing the lever, the weight W swings over to C, the catch preventing its return until again turned over. The reversing is effected with very little power, as the weight is raised but a few inches in the operation.



HARTLEY'S PATENT LEVER BOX.

Specially designed for Colliery Workings, or where economy of space is an object. Is reversible, and can be locked either way, or dead-locked, so as not to work at all.

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Will set over both ways, can be locked so as to work on one side only, or the switches can be locked on either side, so as not to work at all. Takes up less room than any other, as the weight does not turn over; works equally well if full of water; can be supplied at the price of an ordinary lever box.

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 " THE CRUMLIN VIADUCT WORKS COMPANY (LIMITED), South Wales.
 " T. T. J. WALLER, Esq., Railway Contractor, Giasburn, near Skipton.
 " TURNER AND SON, Limestone Quarries, Kiverton Park, near Sheffield.
 " THE CLIFTON AND KERSLEY COAL COMPANY, near Manchester.
 " THE ST. BRIDE'S WELSH SLATE AND SLAB COMPANY, Haverfordwest.
 " THE WARTON LAND COMPANY (LIMITED), Silverdale, near Carnforth.
 " THE MONTIPONI SOCIETY, Turin, Italy.

The following letter has recently been received from the Ebbw Vale Company:—
 Ebbw Vale Works, Monmouthshire, July 5th, 1878.
 GENTLEMEN,—I have much pleasure in stating that in the execution of your contract to drive, for the Ebbw Vale Steel, Coal, and Iron Company (Limited), a cross measure drift from the Old Coal to the Rock Vein Coal, in the Glyn Pits, at Pontypool, you did so with dispatch, and to the entire satisfaction of all concerned. The distance driven was 453 yards in about 13 months.
 Yours faithfully,
 ROBERT JORDAN, Mining Engineer,
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Portable or Fixed, for Wharf or Rail, to hoist 15 cwt. to 30 tons.
 Geared to hoist or lower, and turn entirely round in either direction, by the steam power, separately or simultaneously, as required.

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DESIGNED FOR WORKING WITH COMPRESSED AIR, STEAM, OR WATER PRESSURE.
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No. 1 size, 7 in. single cylinder, with 2 ft. drums.
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Larger sizes made with two cylinders.

A,— 6 in. double cylinder, with 2 ft. 3 in. drums.
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 C,— 10 in. " " 3 ft. 6 in. drums.
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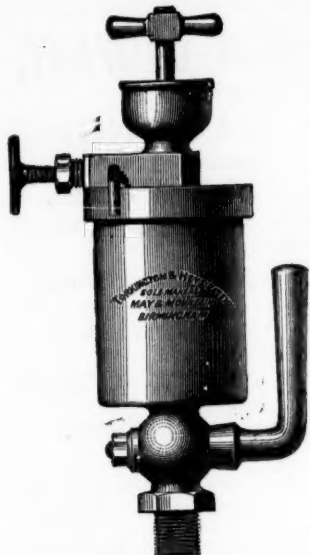
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| 1 | 2 | 5 to 7 | 14 6 |
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| 3 | 3 | 10 20 | 27 6 |
| 4 | 3½ | 20 30 | 37 6 |
| 5 | 4½ | 30 50 | 47 6 |
| 6 | 5 | 50 70 | 60 0 |
| 7 | 6 | 70 100 | 90 0 |
| 8 | 7 | 100 200 | 105 0 |

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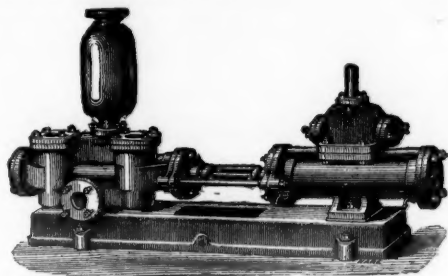
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The Slide Valve is worked by the Exhaust Steam alone.

No Tappets, Valves, Levers, or other Mechanical Appliances.

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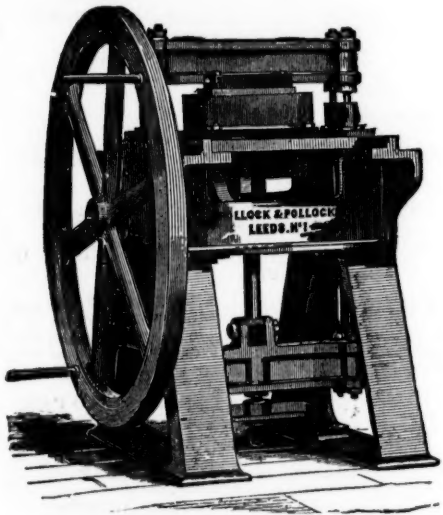
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| Gallons per hour..... | 720 | 1260 | 5040 | 4280 | 9660 | 8700 | 7920 | 12,180 | 12,060 |
| Price | 16 | 19 | 25 | 33 | 41 | 45 | 50 | 65 | 80 |

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DIFFERENTIAL
PUMPING ENGINES.

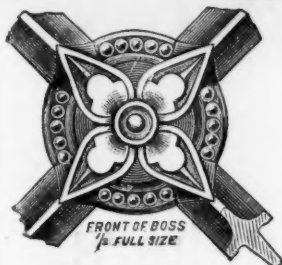


HATHORN, DAVEY, AND CO.,
ENGINEERS, LEEDS.

CATALOGUES ON APPLICATION.

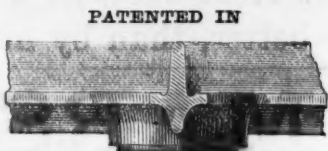
HARRIS'S PATENT WROUGHT-IRON WINDOWS.

DOMES AND OTHER ROOF LIGHTS, FLOOR AND PAVEMENT LIGHTS, ETC.



GREAT BRITAIN,
UNITED STATES OF AMERICA,

ARE STRONGER, SUPERIOR, AND CHEAPER
THAN ANY OTHER METAL SASHES YET
PRODUCED—COST LESS FOR GLAZING—
ARE AS CHEAP IN MANY CASES AS WOOD

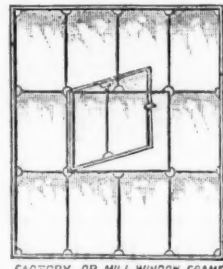
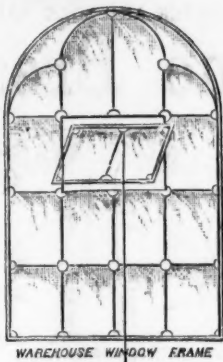
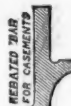


FRANCE,
GERMANY, AND BELGIUM.

—CAN BE DESIGNED AND MANUFACTURED
TO SUIT ANY STYLE OF ARCHITECTURE
OR POSITION WHERE A WINDOW MAY BE
REQUIRED.
ARE BEING EXTENSIVELY USED IN—



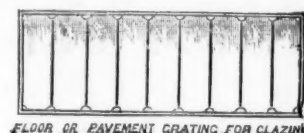
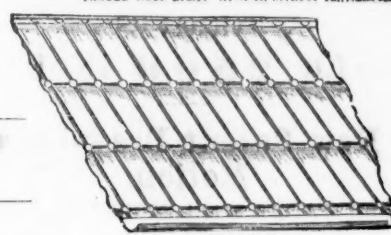
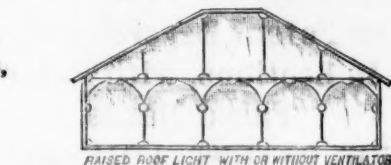
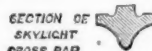
Private Houses,
Parsonage Houses,
Farm Houses,
Churches,
Chapels,
Schools,



Lunatic Asylums, &c.,
Public Buildings, Banks,
Wharves, Warehouses,
Factories, Mills,
Breweries, &c.,
Engine Houses.

ILLUSTRATED CATALOGUES
ON APPLICATION.

Security is obtained in
these Skylights with-
out Guard Bars, and
with less obstruction
to Light.



ILLUSTRATED CATALOGUES
ON APPLICATION.

In Basement Storeys and Exposed Positions Shutters
and Guard Bars are dispensed with.

HOME AND

SOLE MAKER—J. T. HARRIS, Engineer, Ironfounder, and Manufacturer,

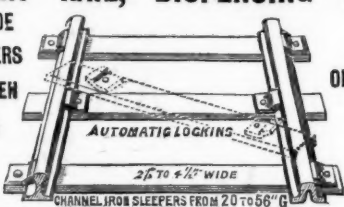
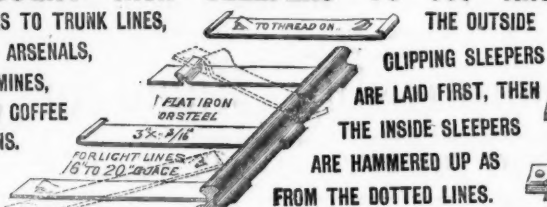
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90, CANNON STREET, LONDON, E.C.; AND BEAUFORT IRONWORKS, BRISTOL

A NARROW GAUGE RAILWAY

WROUGHT IRON SLEEPERS TO FIT ANY RAIL, DISPENSING WITH SPIKES AND ALL LOOSE PIECES.

FOR FEEDERS TO TRUNK LINES,
QUAYSIDES, ARSENALS,
FORESTS, MINES,
SUGAR AND COFFEE
PLANTATIONS.



7 MILLIONS
OF THESE SLEEPERS
ARE IN USE IN
ENGLAND, FRANCE,
GERMANY, BELGIUM.

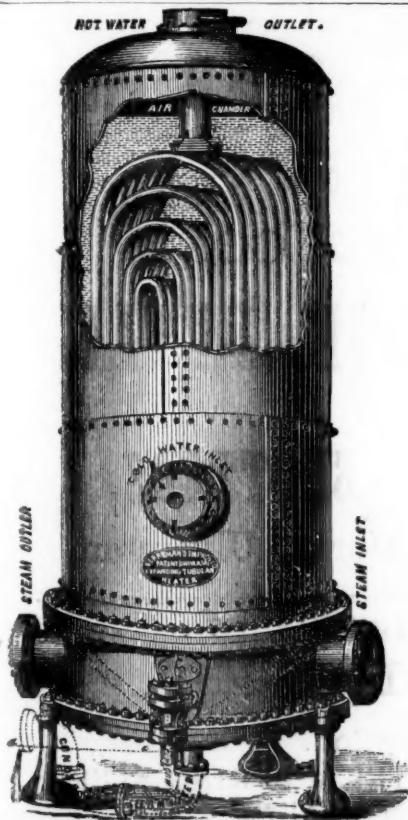


SOLE AGENTS,

SHAW BROTHERS,

BIRMINGHAM.

DRAWINGS & PARTICULARS ON APPLICATION. TO SAVE TIME, PLEASE GIVE GAUGE, WEIGHT OF RAIL AND KIND OF TRAFFIC.



IMPORTANT.

JOSEPH WRIGHT AND CO.

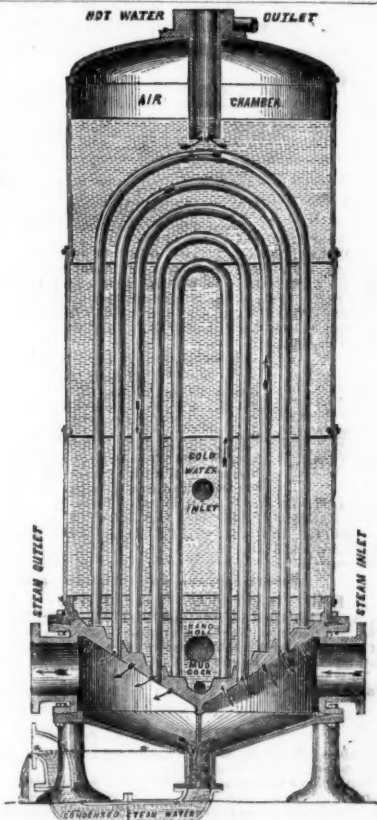
(LIMITED),

NEPTUNE FORGE ENGINE
AND BOILER WORKS,

TIPTON,

STAFFORDSHIRE,

AND AT 147, QUEEN VICTORIA STREET, LONDON, E.C.



Having purchased the Engineering Business lately carried on by R. BERRYMAN AND CO., at 23, Congreve-street, Birmingham, and 23, Wilson-street, Finsbury-square, London, have removed the whole to their Works at TIPTON, to which place ALL COMMUNICATIONS SHOULD IN FUTURE BE ADDRESSED, and where the BERRYMAN HEATER can be seen at work, and in every stage of manufacture.

Being the SOLE MAKERS and PATENTEES of these CELEBRATED COAL SAVERS and EXHAUST STEAM UTILISERS, and having remodelled and greatly improved them, adding largely to their HEATING SURFACE and WATER CAPACITY, J. W. and Co. have put down a special plant, which includes an entire new set of improved patterns, enabling them to offer these FEED WATER HEATERS to the public at

GREATLY REDUCED PRICES.

This arrangement of BRASS TUBES of a great length giving an enormous HEATING SURFACE makes this HEATER not only the MOST POWERFUL ever invented, but its FIRST COST PER FOOT OF HEATING SURFACE IS LESS THAN HALF THAT OF ANY OTHER. It will condense the whole of the Exhaust Steam from the Engine if required, and entirely does away with the NOISE and BACK PRESSURE from exhaust pipes.

ALL THE TUBES ARE OF SPECIALLY PREPARED SOLID DRAWN BRASS AND COPPER; both ends are expanded into the bored holes of the same Tube Plate, METAL TO METAL, and every tube is free to expand and contract independent of each other. Leakage is impossible, as, when the tubes are once fixed, nothing short of cutting out will remove them. No scurf adheres to the tubes because of the difference of expansion between SCURF and BRASS. The inside of the Heater can be washed out by means of the mud cock and hand hole whilst at work.

Only one pump or injector is required, and as the Heater is placed between the pump and the boiler, the water is forced, COLD, into it, and passes out at the top HOT into the boiler direct. Where the WATER WORKS PRESSURE is sufficient no pump or injector is needed.

The water being heated to BOILING POINT UNDER PRESSURE in the Heater, a saving of from 20 per cent. to 25 per cent. in fuel is effected; the disastrous results of grease in boilers are also avoided, the sewage and other loose matter in the water being deposited in the Heater, the acids are liberated there instead of in the boiler.

Every part can be lined with BRASS, COPPER, or LEAD, as may be required in special cases for heating water or any kind of liquor in large quantities for CHEMICAL WORKS, BATHS, WASH-HOUSES, AQUARIA, GREENHOUSES, BREWERIES, WOOL WASHING, DYE WORKS, TANNERIES, &c., &c.; they will also HEAT AIR FOR CUPOLAS AND BLAST FURNACES, and are now at work as INTERHEATERS for compound engines with direct steam from the boiler with a further saving of 15 per cent.

The New Price List, with detail information is now ready, and will be sent on application, together with an Illustrated Catalogue, with references and testimonials from Firms using our HEATERS.

At the PARIS EXHIBITION the Jurors have Awarded

THE GOLD MEDAL, THE SILVER MEDAL, AND HONOURABLE MENTION
FOR MY LATEST PATENTED STONE BREAKERS AND ORE CRUSHERS.

Stones broken equal, and Ores better, than by hand, at one-tenth the cost.

H. R. MARSDEN,
ORIGINAL PATENTEE AND SOLE MAKER OF BLAKE'S

Improved Patent Stone Breakers & Ore Crushers.

New Patent Reversible Jaws,
in Sections, with Patent
Faced Backs.

NEW PATENT ADJUSTABLE
TOGGLES.

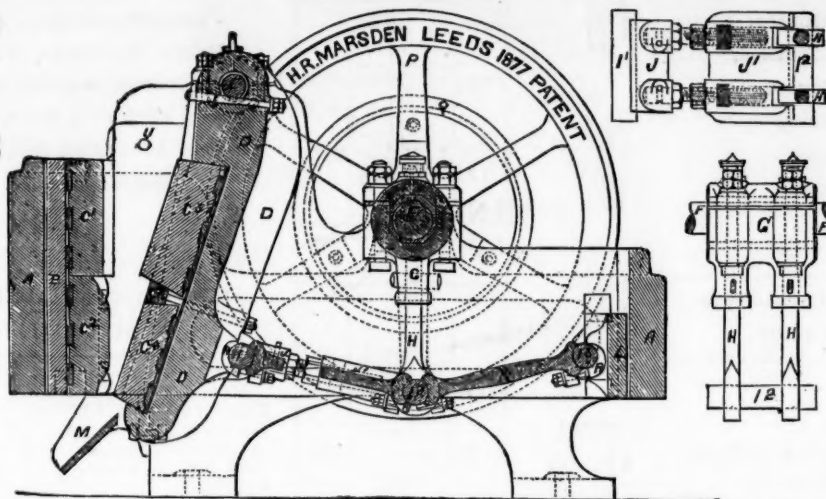
OVER 2500 IN USE.

New Patent Draw-back
Motion.

NEW PATENT STEEL TOGGLE BEARINGS.

70

PRIZE MEDALS.



READ THIS—

Wharfedale Lime Works, Maryport, Whitehaven,
November 7, 1878.
H. R. MARSDEN, Esq., Soho Foundry, Leeds.
DEAR SIR,—The machine I have in use is one of the large
size, 24 in. by 12 in. The quantity we are breaking daily with
this one machine is 250 tons, the jaw being set to break to a
size of 2½ in. We have, however, frequently broken over
300 tons per day of ten hours, and on several occasions over
350 tons during the same period. The stone we break is the
blue mountain limestone, and is used as a flux in the various
iron works in this district. We have now had this machine in
daily use for over two years without repairs of any kind, and
have never had occasion to complain of any inconvenience in
using the machine. I hope the one you are now making for
me may do its work equally well. The cost—INCLUDING EN-
GINE-POWER, COALS, ENGINEMAN, FEEDING, and all EXPENSES
OF EVERY KIND—is just 3d. per ton. Should any of your
friends feel desirous of seeing one of your machines at work,
I shall have much pleasure in showing the one alluded to.
I am, dear Sir, yours very truly,
WILLIAM MILLER.

AND THIS—

Wharfedale Lime Works, Aspatria, Cumberland,
July 11th, 1878.
H. R. MARSDEN, Esq., Soho Foundry, Leeds.
DEAR SIR,—We are in receipt of your letter of 4th inst. I
may just state that the stone breaker above named has been
under my personal superintendence since its erection, and I
have no hesitation in saying that it is as good now as it was
five years ago.
I am, dear Sir, yours faithfully,
FRANCIS GOULD.

GREATLY REDUCED PRICES ON APPLICATION.

ALL BEARINGS are renewable, and made of H.R.M.'s Patent Compound ANTIFRICTION METAL.

CATALOGUES, TESTIMONIALS, &c.

H. R. MARSDEN, SOHO FOUNDRY, LEEDS, ENGLAND.

The Barrow Rock Drill

COMPANY

Are NOW PREPARED TO SUPPLY their DRILLS, the ONLY
ONES that have been SUCCESSFULLY WORKED in the
MINES of CORNWALL. At DOLCOATH MINE, in the
HARDEST known ROCK, a SINGLE MACHINE has, since
its introduction in July, 1876, driven MORE THAN THREE
TIMES the SPEED of HAND LABOUR, and at TWENTY PER
CENT. LESS COST PER FATHOM.

In ordinary ends two machines may be worked together,
and at a proportionately increased speed. They are strong,
light, and simple, easily worked, and adapted for ends and
stopes, and the sinking of winzes and shafts.

The company are also prepared to SUPPLY COMPRESSORS,
and all necessary appliances for working the said Drills.

Apply to—

LOAM AND SON,
LISKEARD, CORNWALL.

BICKFORD'S PATENT
FOR CONVEYING
CHARGE IN



SAFETY FUSE
FIRE TO THE
BLASTING ROCKS &c.

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1861; at
the "INTERNATIONAL EXHIBITION" of 1862 and 1874, in London; at the
"IMPERIAL EXPOSITION," held in Paris, in 1855; at the "INTERNA-
TIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSI-
TION," in Paris, 1867; at the "GREAT INDUSTRIAL EXHIBITION," at Al-
tona, in 1869; TWO MEDALS at the "UNIVERSAL EXHIBITION," Vienna,
in 1873; and at the "EXPOSICION NACIONAL ARGENTINA," Cordova,
South America, 1872.



BICKFORD, SMITH AND CO.,
of TUCKINGMILL, CORNWALL; ADELPHI
BANK CHAMBERS, SOUTH JOHN-STREET, LIVER-
POOL; and 85, GRACECHURCH-STREET, LONDON,
E.C., MANUFACTURERS AND ORIGINAL
PATENTERS OF SAFETY-FUSE, having been in-
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fuse not of their manufacture, beg to call the attention of
the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE
THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICK-
FORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as
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Simple, strong, and giving most excellent results, and
ELECTRIC BLASTING APPARATUS.

Full particulars of rapid and economical work effected
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CONTRACTS TAKEN, OR SPECIAL TERMS FOR HIRE.

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A SILVER MEDAL,

FOR

IRON AND WOOD REVOLVING SHUTTERS,

Worked by their PATENT BALANCE-WEIGHT MOTION.

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